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ADDRESSES.

THE RESPONSIBILITY OF DIPSOMANIACS.

Read in the Section on Medical Jurisprudence, at the Forty-first Annual Meeting of the American Medical Association, Nashville, Tenn., May, 1890.

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CHAIRMAN OF SECTION ON MEDICAL JURISPRUDENCE.

In the present period, when the attention of the whole civilized world is being directed to a consideration of the ravages that follow the improper use of alcoholic beverages: when legislators, National, State and municipal in our own country are deliberating upon the enactment of laws for curtailing their use; when Judges of law are departing from old and well recognized decisions as to the responsibility of the victims of its abuse, it is right and proper that from this medical centre, there should go forth some expression of our conclusions, based upon the facts that support and sustain the faith that within us rests.

It is hardly necessary to attempt a portrayal of the consequences that follow the inordinate use of alcohol; it is written in letters of living light all over the history of the world. The almshouse, the penitentiary, the jail, the insane asylum, the desolate fireside—all, in solemn acclaim, and with one accord, attest that of all evils, it is the most potent. Far-reaching in its influence, debasing in its effects, withering in its blight. Beneath its subtle spell truth lies prostrate, honor dethroned, love extinguished, joy dispelled, and crime exalted. It is somewhat singular that long ago the question "of how to chain this great evil," has not been definitely determined. Great evils of far less importance have had around them thrown the restraining influence of the law, and the effect has been a great advance, in lifting up the lowly and bettering the condition of the human race. But King Alcohol has reigned supreme, his realm has not been invaded, his subjects are loyal and true, and so mighty in power, that no opposing force has been able to hold the field against them. In this day of free thought, with brain and mind unfettered, surely there will come some means to stay the progress of this great and burning shame that is now threatening our National life, undermining the foundations of law and order, and stamping upon mankind the curse of its impress. It is a question that appeals to every lover of his race, to every lover of home and fireside; its bloated front may enter your family circle; its bleared eye, distorted and wild, may be seen in the person of a loved son or a doted daughter, and it may be that they are not responsible beings, that heredity placed upon them a seal whose lines were engraved by their progenitors. Although legislation is necessary to restrain men from its abuse, and should be consummated, yet such action is environed with difficulties. As a rule men do not like prohibitory laws, and oppose them often upon principle alone, without regard to the good that may be accomplished. Therefore, the people must be educated up to the standard of a higher law, that will teach them the dangers that beset and are sure to follow the use of alcohol in any form. There is no class of men that can do this with as much force and emphasis, and command the respect and attention of the community as the physician. It is our duty as physicians to teach the public how to subdue an epidemic, but better far, to teach them how to prevent it. Preventive medicine is the brightest gem in the diadem of science, for there is more glory in arresting disease at the fountain-head, than to endeavor to dam the current, swollen by a thousand tributaries. It is our duty as physicians, by concerted action, to hold aloft the banner of science, and with fervent zeal impress upon the mind of the world the fact that alcohol is a poison, a drug, that stamps upon the nerve centres impressions that appear in the brain of the offspring; a pestilential spirit whose bated breath is laden with germs of weird and mystic power, that make their nidus within the brain, grow, expand and multiply, filling its tortuous and winding halls with their progeny, subduing its energies, paralyzing its functions, dethroning reason, and transforming God's best and noblest work into a foaming, raging demon.

It has been demonstrated satisfactorily to every unbiased mind that alcohol has an elective affinity for water, greater than for any of the tissues of the body.[1] Upon the dead tissue it causes con-

[1] Dr. T. Rogers, New York Medico-Legal Society.

traction and shrinking of its substance by the absorption of water contained therein. That this same process takes place upon the living tissue is shown by dropping alcohol upon the web of the frog's foot, or upon the wing of a bat. The movement of the blood in the vessels soon stops, the corpuscles congregate and contract, the calibre of the vessels diminishes, till at last all movement and vitality ceases in the part and it remains a shrunken, leathery, insensible structure, very liable to slough and disappear. This effect is more or less marked as the fluid is more or less purely alcoholic. That a similar result may take place when more or less concentrated alcohol is introduced into the cavities of the living body, may be reasonably inferred from the well-known fact that thirst follows the use of alcoholic drinks, at the same time that increased urinary discharge occurs, the alcohol displacing a more or less considerable amount of water from the tissues of the body, throwing it into the circulating blood, whence it passes off by the kidneys. It therefore appears that both in the living and dead tissues of the animal body the affinity between water and alcohol is actively manifest. An obvious corrollary would be, then, that the greater amount of water any animal tissue may contain, the more marked will be the action of alcohol upon it. Now, of all the structures of the human body the brain is that which contains the largest per cent. of water, and, therefore, under similar circumstances it will be the organ most markedly affected by alcohol. Dr. Carpenter upon this point says, that this affinity of alcohol and water is such as will occasion the continual presence of alcohol in the blood, even in very minute proportion, to modify the nutrition of the nervous substance more than that of any other tissue; for the alcohol will seek out, as it were, the nervous matter and fasten itself upon it. In a fit of intoxication the commotion set up between the alcohol, circulating in the blood through the vessels of the brain, and the watery portion of the brain substance surrounding these vessels, which water portion constitutes about 80 per cent. of the mass of the brain, it is not difficult to comprehend how a permanent alteration of nerve structure may result from repeated attacks of that character.

Dr. Maudsley, in his learned work upon "The Physiology and Pathology of the Mind," says the influence of alcohol upon the mental functions furnishes the simplest instance in illustration of the action of a foreign matter introduced into the blood from without. Here, where each phase of an artificially produced insanity is passed through successively in a brief space of time, we have the abstract and brief chronicle of the history of insanity, because the action of the poison upon the nutrition of the nervous centres is quick and transitory; but we have only to spread the poisonous action over years, as the drunkard does, and we get a chronic and enduring insanity.

Nasse says the physical disturbances which result from the abuse of alcohol are numerous. Besides the digestive apparatus and the blood and brain, the blood vessels gradually degenerate, and there is hardly an organ of the body which does not undergo pathological changes in consequence of the impaired general nutrition, and every habitual drinker arrives finally at a state of mental disease founded on tangible changes in the functions of the brain, and characterized by dulness of the senses, the judgment and memory, by weakness of the will and loss of the faculty of self-control. Whether he has arrived at this point by way of a vicious habit or under injurious influences in consequence of an abnormal organization, the result of continued drinking is the same. We have a morally depraved, mentally and physically sick individual on our hands.

Prof. Greismeyer says that every degree of drunkenness represents a grade of real insanity, being a dreamy condition, with many illusions and hallucinations. The habitual drinker exhibits, even when not drunk, many signs of chronic brain trouble, and his condition may gradually merge into insanity. In the brain of the habitual drinker, as in that of many insane, may be found the results of passive stasis, of chronically formed opacities and thickening of the membranes. The habit of drinking is so strong, and the representatives against it in the drinker so feeble, and his will to abstain so weakened, that though fully conscious of becoming dishonored and despicable, though his health is failing and his domestic happiness going to ruin, yet every day anew he will break his good resolutions.

Dr. Taylor says that pathological investigation shows the brain is changed from a healthy to a diseased state by the action of alcohol. Healthy thoughts and healthy moral sentiments are not evolved by a diseased brain. To its possessor we attach no moral responsibility. An inebriate has a diseased brain; no will or agency of his own can bring forth therefrom other than diseased mental and moral products. A person who is governed by an uncontrollable appetite, or by an uncontrollable influence, is not a responsible being.

Dr. Hutchinson states that a confirmed inebriate is an insane man, dangerous to himself and others, and however responsible he may have been for bringing the disease on himself, his responsibility ceases as soon as he comes under its influence.

Numerous authorities might be quoted other than those mentioned, all showing the drift of medical conclusions as to the effect of alcohol upon the brain and the responsibility of dipsomaniacs. I do not know that there is any fact in medicine so clearly shown by reason, observation and experience: that the dipsomaniac is an irre-

sponsible being, a diseased, stricken individual with a crooked brain, in which reason and self-control have no abiding place. For him there is no sunshine; the silver sea of dawn and evening's cloud of molten gold, the solemn splendors of the night, and all the voices of the sea, wake not his soul to gladness. There is but one thought, one desire, that wanders through his brain, born of an insatiable, uncontrollable thirst for alcohol, and for it he sacrifices all that is dear to the human heart, the ties of love, the prattle of children, the sacredness of home, priceless honor. To say that one is insane is enough to command the sympathy and commiseration of every true man, and when insanity has been diagnosed beyond a doubt the law does not hold the individual responsible for any of his acts. Therefore, if it is fairly proven that dipsomania is a disease of the brain, that it is a form of insanity, and that the dipsomaniac is an insane person, why should he be held responsible for his acts and deeds, while the insane from other causes are held to be irresponsible? The effect is the same, although the causation may be different, and there is no justice in differentiating their relationship to responsibility and irresponsibility. Insanity is insanity, no matter what the cause.

As early as the time of Chief Justice Coke, it was formulated that for criminal acts done in the condition of drunkenness, the person was doubly guilty, for inebriety always aggravated the offence, and that the penalty should be increased rather than diminished. This view has been accepted by legal minds, as being just, and eminently conservative of social and proprietary rights. A recent judicial charge might be quoted to show that there has been very little improvement upon the legal dictum of Chief Justice Coke, in regard to the plea of irresponsibility. Our efficient and well qualified secretary, Dr. Crothers, testified in the case with his usual clearness and perspicuity, that the prisoner was insane, and not responsible. The Judge said: "No insanity or irresponsibility can be predicated in any given case, unless the mind showed a continuance of delirium or delusion. And that in no case should this be taken into account or mitigation of guilt, if it resulted from alcoholic intoxication." This decision is based on the old English law, that intoxication is never an excuse for crime, and that no man can plead that he should be exempt from the law by reason of not knowing or not being able to control the extent and force of his acts, by reason of being drunk, and that drunkenness is a voluntary insanity, and those who use alcohol to that degree know full well the consequences of that act. A decision of that character is unjust. It belongs to the dark ages. It is born of ignorance, and is opposed to the principles of pathology and common sense. The fact is patent, that judges are generally ignorant of the physical laws that govern and control insanity; seeing that by long experience and devoted study only, is a profound knowledge to be acquired, it is not to be wondered that they so often fail to administer the law justly. But not only are judges incompetent in many instances; the average juror is still more. How is it possible for twelve men drawn from the masses to be equipped, and qualified to decide the delicate and complicated question of a prisoner's mental condition. Again, the medical profession, unless they have had special training, are likewise incompetent. There may be some cases of insanity so well marked, that it would be comparatively an easy matter to decide the question. But the majority of cases require the specialist, who has made a study of insanity in all its varied forms. He must be a physician and something more.

A great deal of the confusion that prevails in the profession, is owing to the fact, that every man thinks he knows as much about insanity as he knows about common continued fever. The grave and complicated questions, that enter into the consideration of each and every case, the predisposing and exciting causes, its occasional sudden accession, its intermissions and remissions, its varied phases of depression, excitement, or violence, its premonitory symptoms, its different symptoms, and probable termination; can only be determined by the trained medical mind. It is not a question for judge or juror to decide, without the aid of competent, scientific, unbiased evidence. There is a radical reform necessary of the law, in regard to medical jurisprudence. It is high time, that some advance should be made in that direction, and that we had closed the musty tomes of the past filled with judicial errors, acts of grevious injustice, and opened a better volume; a warmer, brighter record of law, wherein humanity can find a plea, science a place of honor, and dipsomania justice. Already some judicial minds are moving in that direction, the dawn of a new era is begining to rise; and all the horizon around is invested with bright rays. In England and elsewhere some eminent jurists have decided "that a man may be convicted of an offence committed in drink, and yet be absolved from responsibility." For example, as reported in *The Lancet*, Baron Pollock has held that a plea of irresponsibility was tenable in a case where a homicide was committed by a person after taking a small quantity of alcoholic liquor, a quantity not sufficient ordinarily to disturb the reasoning faculties, but which, in the case in question, was sufficient to set in motion an insane predisposition that became the prime agent in the manslaughter. Another eminent judge in England has recently ruled, in regard to the case of a drunken mother, who, through the neglect of her babe, occasioned its death by starvation; the withholding of nourishment by the mother was

not a crime for the reason that it was undesigned, and that it is not a declared crime to imbibe too much liquor.

Chief Baron Pallos has recently ruled, that neither law or common sense can hold a man responsible for the acts done under the influence of an intoxicant, if by reason of long vigil, deprivation of sleep or impoverishment of the blood, he shall have become so reduced as to be made drunken with a smaller quantity of liquor than would have produced that effect upon him in good health. Justice Day has gone still further, and has delared "that a person who does not know the nature and quality of the acts he commits, is not responsible for them whatever may be the cause of his unconsciousness. These decisions have about them the true ring, and is a complete reversal of the decisions, that have ruled the courts of the world for three centuries. They are in harmony with the teachings of science, in accordance with all authorities upon insanity, and apace with the advance and general improvement made in all branches of medical knowledge since the day of Lord Coke.

It becomes the duty of every physician to promulgate the facts as laid down by these eminent jurists; and to support and sustain the principles involved therein upon all occasions. There must be no conflict in the future, as there has been in the past, between law and medicine. We must always insist that dipsomania is a physical corporeal disease in common with all forms of insanity, and must be diagnosed by competent medical authority. The right interpretation of its symptoms belonging alone to the realm of medicine. Then alone will justice beam with all the brightness and purity of unsullied truth; humanity glow with the splendor of righted wrongs, and the Genius of Medicine, unshackled and free, side by side will stand with the Genius of Law, clothed with all the majesty of might and power, to elicit truth, to administer justice, to those bereft of reason, by that demon Alcohol.

GENERAL MEDICATION IN THE TREATMENT OF SKIN DISEASES.—DR. A. H. OHMANN-DUMESNIL, in the St. Louis *Clinique*, January, 1890, says that general medication is frequently of more importance in the treatment of skin diseases than local measures, and he cites an example of a strumous child of 8 years suffering from eczema and tinea tarsi who was cured by the internal administration of cod liver oil. We cannot let this opportunity pass without expressing our gratification at thus seeing a specialist for the skin advocating general treatment. With the exception of parasitic diseases, there are no diseases of the skin in which local treatment is absolutely necessary, while even in many parasitic diseases constitutional treatment is very beneficial.—*Canada Medical Record.*

ORIGINAL ARTICLES.

A NEW MOUTH GAG. TOGETHER WITH THE CONSIDERATION OF OTHER POSSIBLE AIDS TO BETTER RESULTS FROM INTUBATION OF THE LARYNX.

Read in the Section of Laryngology and Otology, at the Fortieth Annual Meeting of the American Medical Association, June, 1889.

BY CHARLES DENISON, A.M., M.D.,
OF DENVER, COL.

Your indulgence is needed for the crudeness of this paper and the immature thoughts I have to offer, for one of the instruments I have to present was only finished the day I left Denver on my way here, and the description and argument have necessarily found expression since that time.

However, if a strong belief, backed by a peculiar and varied experience, that intubation of the larynx is a better operation than results up to now have proved it to be; in other words, that the ratio of recoveries by that operation is susceptible of much improvement—if this is any excuse for my burdening you, then I shall not despair of your concurring approbation or your opposing criticism. If you feel as I do about it, you will welcome any agitation of this subject that will give promise of some realization of the above expressed belief.

For purposes of reference and comparison I herewith append a table of all the intubation cases I have had up to the first of this month, namely: twenty-five, in which there were seven recoveries, counting as a recovery one case which died of paralysis or failure of the heart five days after the tube had done its full work and has been removed.

Of course I desire some allowance to be made for the exceedingly unfavorable character of these cases, just as every operator does who is called in to perform intubation as a *dernier ressort* after the attending physician has vomited, blistered, and "given up" the little patient. A previously existing pneumonia, so that a whole lung is solidified, as was the case with two of the list, is also calculated to impress the operator with the belief that he could have a better record if he would refuse to intubate some cases, which I have in no case done.

It is further to be remarked, as will be more apparent further on, that the atmospheric conditions under which these operations were performed, together with a marked tendency to catarrhal broncho-pneumonia in cold weather at and above 5,000 feet elevation, must have an important bearing upon these records.

A PROPER GAG.

My experience with the gag accompanying the first sets sold of O'Dwyer's tubes, convinced me

TABLE OF CASES OF INTUBATION.

that a better means of getting and holding open the patient's jaws must be devised. The long handles being hit by the child's shoulder or some other part, thus disengaging the instrument, together with a bitten and poisoned index finger, settled the question for me, and I devised a simple two-armed gag separated by a ratchet controlled by the thumb and forefinger, which has served very well in many subsequent intubations. The troughs or supports for the jaws or teeth

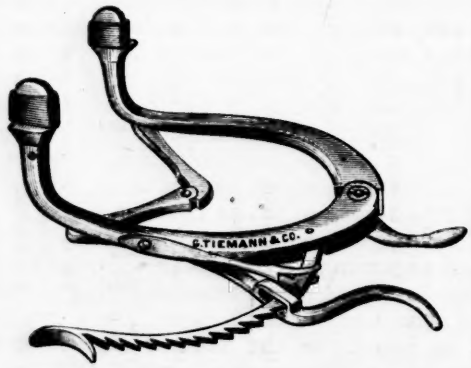
TABLE OF CASES OF INTUBATION.

No.	Date.	Initials of parents or of patients.	Whose patient previously.	Age and Sex.	Duration before Intubation. Croup, Laryngeal.	Duration before Intubation. Diphtheria, Pharyngeal.	Cause of Death.	Complications and Character of Disease.	Result and Remarks.
	1887.								
1	Feb. 1.	J. H. T.	C. Denison	6 yrs. M.	1 day.	None		Preceded by measles, followed by broncho-pneumonia. Membranous croup.	Recovery. Tube expelled with casts.
2	Mar. 28	H. A. S.	Dr. J. B. Corey	14 mos. M.	7 days.	"		Measles while tube was in. Membranous croup.	Recovery. Tube taken out 3d day and immediately returned, worn 9 days and 20 hrs.
3	Mar. 30	N. A. B.	Dr. P. V. Carlin.	4 yrs. F.	4 "	1 day	Septic state and extension to bronchi.	Diphtheria	Died 16 hours after intubation.
4	Oct. 1.	E. J. D.	Dr. S. A. Fisk.	2 yrs. M.	2 "	1 day	Membrane loosened and stopped up the tube.	Diphtheria	Died. Tube in 4 hours.
5	Nov. 19	J. B. N.	Dr. Walker.	6½ yrs. M.	3 "	?	Extension to bronchi.	Membran. croup. Tough membrane.	Died. 1 A.M. and 3 P.M. same day casts expelled, loosened by tube; membr. re-formed and extended to bronchi; died 36 hrs. after intubat'n.
6	Nov. 30	J. K. M.	Dr. Morris	3½ yrs. F.	3 "	1 day	Broncho-pneumonia and extension.	Diphtheria, broncho-pneumonia.	Died 10 hrs. after intubation.
7	Dec. 14,	G. F. B.	Dr. Carlin.	2 yrs. F.	3 "	None	Pneumonia	Membranous croup, pneumonia, 1 lung solidified.	Died 20 hrs. after intubation.
8	Dec. 30.	J. Q.	Dr. Carlin.	4 yrs. F.	2 "	1 day	Extension to bronchi.	Catarrhal pneumonia, diphtheria.	Died 44 hrs. after intubation. Intubated twice.
9	Jan. 9.	P. L.	C. Denison	18 mos. M.	2½ "	?	Broncho-pneumonia and extension to bronchi.	Membranous croup?	Died 30 hrs. after intubation. Intubated three times; tube coughed up.
10	Jan. 25.	H. M. H.	Dr. F	5 yrs. F.	8 "	7 days.	Strangulation.	Diphtheria. Failed to notify the doctor for second intubation	Died. Wore tube 30 hours; died 36 hours after intubation.
11	Feb. 23.	L. C.	Dr. Crane.	3 yrs. 1 m. F.	5 "		Extension to bronchi.	Diphtheria? Dulness and moist râles. Broncho-pneumonia.	Died 40 hrs. after intubation.
12	Feb. 25.	L. McG.	Dr. Edson.	3 ys. 10 m. F.	2 "	2 days.	Extension downwards & catarrhal pneumonia.	Diphtheria	Died 20 hrs. after intubation.
13	May 12.	R. H. A.	Dr. Clough	4 yrs. 4 mos. very small for age. M.	4 "		On arrival child was strangulated.	Membranous croup. Catarrhal or "aspiration" pneumonia.	Died 12 hrs. after intubation. Intubated child lying down and apparently dead.
14	Apr. 30.	M. R., Minneapolis.	Drs. Morris and Nevins.	6 yrs. 7 m. F.	6 "	2½ days.		Membranous croup.	Recov'd; tube in 4½ days, coughed up with the softened membrane.
15	Oct. 26.	A. D. C.	Clark and Morris.	6 yrs. M.	4 "	2 days.		Diphtheria	Recovered tube in 5 days.
16	Nov. 20	A. D.	Dr. Lattimer	5 yrs. F.	3 "	1 day	Broncho-pneumonia, exhaustion and extension to bronchi.	Diphtheria and catarrhal pneumonia.	Died 12 hrs. after extraction of tube. Tube in 3½ days.
17	Dec. 1.	J. McH	Dr. Carlin.	4 yrs. M.	3 "	?	Catarrhal pneumonia.	Membranous croup?	Purulent expectoration thro' tube; tube removed and at once returned; membrane below tube; death 24 hours after intubation.
18	Dec. 13.	R. H.	C. Dennison.	8 yrs. F.	10 hours.	10 days	Heart failure five days after removal of tube.	Diphtheria; 3 crops of membrane on pharynx.	Died. Success as to the membrane extracted with tube.
19	Dec. 28.	Mrs. J. W.	Dr. Wilson	28 yrs. F.	½ hour	1½ days.	Sepsis and exhaustion five days after confinement. Her two children had diphtheria at the time.	Diphtheria	Tube in 25 minutes and then coughed up with cast following; died 32 hrs. afterward.
20	Dec. 26.	L. M.	Dr. L. E. Lemen	27 mos. M.	2 hours	?		Membranous croup.	Recov'd. Tube removed Dec. 28 and 30 and Jan. 1, and returned immediately; tube worn 8 days 7 hours.
	1889.								
21	Jan. 9.	F. E. W.	Dr. Davis	13½ mos. F.	3 "	7 days.	Diphtheritic bronchitis.		Died 30 hrs. after intubation.
22	Jan. 11.	J. J. McD.	Dr. Davis	17 mos. M.	4 "	No membrane seen.		Had measles with tube in. Diphtheria.	Recovered. Membrane came up with tube; intubated twice afterward; tube worn 7 days and 10 hours.
23	Jan. 16.	B. F. A.	Dr. H.	3 ys. 10 m. F.	3 "		Purulent bronchitis.	Broncho-pneumonia	Died 68 hrs. after intubation; tube worn all the time; taken out once for cleansing.
24	Mar. 24	M. W. D.	Dr. Kimball.	3 yrs. 6 m. M.	24 "	3 days.	Extension of membrane to bronchi.	Diphtheria; several crops.	Tube removed twice in 2 and 3 days; died with tube in 4 days and 1 hour.
25	Mar. 30	P. M.	Dr. Bliekensderfer	3 yrs. 3 m. F.	36 "	7 days.	Septic and catarrhal bronchitis.	Suppressed scarlet fever.	Tube in 29 hours; died 12th day from first attack suppressed scar. fever.

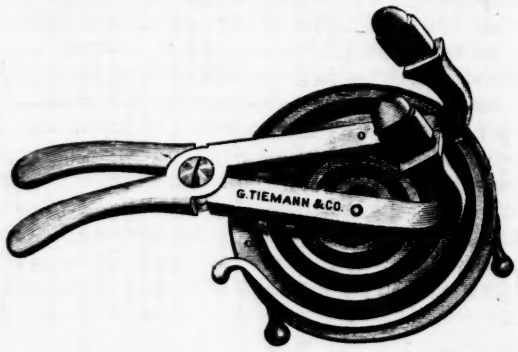
Under four years of age, 13, with three recoveries; four years or over, 12 cases and four recoveries. Average time tube worn in successful cases, 4½ days.

were made slightly swivel, so as to fit the angle of the jaws of any aged child—a new device of my own so far as I am aware. The requirements

of a perfect mouth-distender seem to me to be, 1, that it should be possible for the assistant to hold it in place without any fear of its being disengaged during the operation; 2, that it should fit any aged child and not injure the gums of toothless children; and 3, that it should be strong enough and easily managed though the patient resist. This is no easy task to accomplish, for the strength of a five or six year old boy's jaws is something not to be sneered at. The new instrument here presented, lately made for me by Tiemann & Co., would answer all requirements if it gave a little more power to distend the opposing jaws. It has or gives a wide sweep of a lever which works on a toggle joint and thus distends the arms upon the ends of which are the swivel jaw troughs. These troughs should be bent back at less than a right angle to the side arms so they will point inwards and backwards, and thus engage the jaws not quite as far forwards as the incisor teeth.



The third and last invention here presented is likely to be the best gag, because it answers all the requirements of a perfect instrument. With it the jaws of the most rebellious youth can be worried open and held so by the aid of a competent assistant who can hold still the patient's head. The power by which the jaws are distended by this instrument depends upon the sliding of a pivot attached to one arm in three elliptic grooves made on a circular plate, the centre of which is pivoted to the other arm of the gag. The wedge-shaped teeth troughs first, I believe, recommended by Dr. , of New York, are used on this instrument to favor an entrance between the closed teeth. The gag is to be held by the assistant firmly against the left cheek of the patient when in use.



THE PREVENTION OF "ASPIRATION" PNEUMONIA.

This "aspiration pneumonia," as Dr. O'Dwyer calls it, in correspondence I have had with him, is to my mind, a very important consideration. I would call it an *œdema* of the air cells, though undoubtedly the records of deaths from bronchopneumonia, catarrhal pneumonia, catarrhal bronchitis and "extension to bronchi" often refer to a similar cause.

In my fourteenth case (see table) I made what I believe was a very important discovery, which was decidly confirmed in one other case of recovery—the twenty-second in the table.

This little girl, in April, 1888, was taken with membranous croup while on her way from California to her home in Minneapolis. The tube was worn four days and then coughed out with the softened membrane. This was a good case and no one could doubt the agency of the operation in saving the child's life. I was induced to intubate earlier than usual (pulse 96, respirations 32 or less and temperature about 100° F.), by noting that there was a very perceptible *weakening of the tension of the pulse during inspiration* compared with the tension during expiration. This is the point. Aspiration was undoubtedly already commencing, which, to my way of thinking, has evidently rendered fatal otherwise very favorable cases. Of course it is difficult and sometimes impossible to determine this condition in rapidly breathing children, with hearts beating away at the rate of 130 to 170 a minute. If we could have sphygmographic or other methods

(aside from the tactile sense) of determining the commencing rarefaction of the air in the lungs, I believe we would possess a guide to much better success from intubation. You will, I think, acknowledge that we are to expect a greater liability to this aspiration pneumonia with the air pressure at 12 lbs. to the square inch (as in Denver) than as you have it at sea level. If the difference in air pressure noted as existing in the lungs during inspiration and expiration amounts to anything, it means that the necessity of supplying oxygen to the blood must be accompanied by an increase of such difference in rarefied atmospheres. That there is such difference there is not only no doubt in my own mind, but it is in perfect accord with the fearful mortality after intubation, through this so-called aspiration pneumonia. All of which points to the danger of delay in operating for membranous croup or any laryngeal stenosis. Let us try to learn something from the record of deaths after intubation. In my own list of eighteen cases of death fourteen were evidently complicated with pneumonia and bronchitis, either diphtheritic or catarrhal, which in several instances seemed to develop about a day after the first operation. For instance, excluding cases where the cause of death was otherwise apparent, or the extension of diphtheritic or croupous membrane was known to have occurred down in the bronchi, and we have nine cases in which death occurred on an average of twenty-six hours after intubation. What was it that occurred in these cases? As I have before intimated, the higher the altitude and the more serious the strangulation (and none could be worse than some of those nine), the more apt are we to get these subsequent lung complications. For instance in case 13 of my list, as I was commencing to operate the child gasped and was evidently dead. I therefore asked Dr. Clough to put him back on the bed. Then I thought I would intubate any way, which I did, as the child was on his back, without using any gag, for the child's jaws were perfectly limp. Then by using artificial respiration the boy was brought back to consciousness in half an hour, so that he sat up and drank a glass of warm milk. Yet, as I predicted at the time, he was a dead child in twelve hours. The subsequent filling up of the lungs was undoubtedly due to the aspiration which had occurred at the time of the strangulation mentioned. One of Dr. A. Caillé's cases must have been very similar. He says, "I believe that I would be able to report at least one more recovery if intubation had been done earlier in one case, for breathing had actually ceased and artificial respiration had to be practiced."[1] In my own list I have seen no case recover which even approximated the above condition in seriousness, unless it was the first. But this was in a splendidly developed boy 6 years old, and age seems to make considerable difference with reference to the liability to this accident of aspiration or œdema in the lung periphery.

Now taking the published records of other operators, such of them as happen to be on hand, and we have evidence enough that there is a very considerable mortality after intubation which is not satisfactorily explained, except upon some such supposition as is here advanced.

Dr. Dillon Brown's record of his first 200 cases gives 54 recoveries, and in 88 out of the 146 fatal cases there was either extension to bronchi or pneumonia.[2]

Dr. J. Mount Bleyer's list of 206 cases gives 67 recoveries, and in 106 of the 139 fatal cases there was either broncho-pneumonia, pneumonia, bronchitis, or extension to bronchi.[3]

Dr. W. P. Northrup, in his "Pathological Anatomy of the Respiratory Tract After Death from Laryngeal Diphtheria and Intubation," found that of 87 post mortems made, "in 54 cases there was pneumonia, the diagnosis of which was made either from obvious signs of consolidation, or, when this was not well developed, from the microscopic findings."

In a list of cases presented to the New York Academy of Medicine, June 2, 1887, by Dr. Dillon Brown, made up from the records of many operators, including Dr. Joseph O'Dwyer's, his own, Dr. Huber's, Dr. Waxham's, Dr. Northrup's and others, the causes of death in 339 cases were analyzed. Of these, 212 were put down as diphtheritic bronchitis, pneumonia, pulmonary œdema and bronchitis.

Now here are samples of records which show that from 60 to 70 per cent. of deaths after intubation resulted from these lung complications. The questions naturally arise, what proportion of these complications are due to aspiration, directly or indirectly? and are there other unexplained conditions which contribute to this mortality? As for my own belief I cannot accept *as conclusive* the simple dictum that a diphtheritic membrane had extended into the bronchi in anywhere near the proportion of cases so stated. It is natural, perhaps, for operators to put the worst construction on those cases which were fatal. An exact description of the lung condition is not stated, and the damage which had occurred before they had intubated is of course not eliminated.

Turn the subject over as we will, we are compelled to return to a remarkable death-rate in a throat disease due to secondary lung complications, which have not yet been clearly explained. Let us admit, for the sake of argument, what seems entirely reasonable, namely, that the dan-

[1] Contribution to the discussion on Intubation of the Larynx.

[2] "Intubation of the Larynx in Diphtheritic Croup," reprint New York Medical Journal, March 9, 1889.
As to ratios and character of cases my own list tallies very closely with Dr. Brown's interesting analyses of his own cases.

[3] Journal of the Respiratory Organs for April, 1889.

ger in an intubated case of diphtheritic laryngitis is equivalent to that of three separate serious conditions, *i. e.*: First, the diphtheria, or septic state; second, the danger of, or actual existence of, aspiration pneumonia, an assumption which is warranted from the simple fact or reason of an intubation performed; third, the presence of the tube in the larynx, exclusive of the strangulation it has averted. The shock to the patient, injury to parts, or prevention of respiration in operating, enter as aggravators of all these dangers under varying conditions, but especially the last.

Considering these three dangers separately, the ratio of deaths due to lung complications is way out of all reasonable proportions due to such a septic state. I am aware that Dr. Dillon Brown, in his paper read before the New York Academy of Medicine, "Dangers and Accidents of Intubation," says "that the cause of death when due to pulmonary complications is, in the vast majority of cases, not pneumonia, but an extension of the disease to the bronchi—a diphtheritic bronchitis." Mark, however, that he does not recognize any other cause existing for pneumonia or pulmonary œdema in the excuse given for his conclusion, which is at least an insufficient basis upon which to establish the presence of "a diphtheritic bronchitis." He continues: "Pneumonia is not a common complication of diphtheria when the larynx is not involved, although the same condition exists; the inspired air is septic." The comparative freedom from lung complications in cases where there has been no dyspnœa settles this question, and we must look further for the great amount of lung and bronchial disease.

2. To my mind the second danger—this question of aspiration—more than any other explains the situation. The delicate air cells, with their extended area taken as a whole, furnish a tractive force upon the pulmonary circulation. When this laryngeal obstruction commences, that overdistends and perhaps paralyzes the walls of the capillaries which surround them. This œdema may then go on to a pulmonary engorgement or congestion, on the one hand, or through transfusion of the liquor sanguinis into a catarrhal bronchitis, on the other hand; or a combination of the two in a broncho-pneumonia might naturally result. This crude explanation of what I would style the major process is advanced for what it is worth, but it is certainly more satisfactory to me than the assumption of the extension downwards of a diphtheritic membrane, which, however, in a small proportion of cases evidently does occur.

The third danger named—the tube in the larynx—is a difficult problem to solve, and it is not to be lightly considered until we can fairly eliminate the results of substituting an inflexible metal tube for the delicately organized human larynx. I am aware that Dr. O'Dwyer says: "Intubation in chronic stenosis of the larynx in the adult is not followed by any inflammatory changes in the lungs." Yet the dangers to be feared must be noted as pertaining particularly to childhood, and that, too, in inverse ratio to the age. Besides, the same author states as an etiological fact: "*The presence of the tube*, whether it be in the larynx or in the trachea, not because it may admit a little of the milk or other fluids swallowed, but because it prevents closure of the glottis, and consequently prevents that compression of the air which is essential in order to give full expulsive power to the cough. The irritating secretions, therefore, instead of being promptly expectorated, accumulate and are aspirated into the air cells, where they sooner or later excite inflammatory changes."[4] This is both lucid and, coming from the source it does, authoritative.

It seems to me that the lack of any restraint to the outward expulsion of air in the act of coughing might result in such an exhaustion of the air in the lungs, that when the quick rallying due to expansion followed, a suction on the interior alveolar walls might result, threatening or causing atelectasis. In harmony with this idea it has occurred to me best to control the cough by anodynes, and the result thus far, excluding the increased liability of clogging up the tube, has always been salutary.

The only further possible influence to mention is to put a question which suggested itself to me while reading Dr. F. H. Hooper's article on "The Respiratory Function of the Human Larynx."[5] Is it possible to let too much air into the delicate lungs of a child? or does this practical abolition of the larynx unduly disturb or destroy the mechanism of respiration?

It may be claimed, especially by my friend Ingals,[6] that a considerable proportion of pneumonic complications arise from fluids entering the tube in feeding. I do not wish to underrate this possibility; at the same time I have to remember that five successful cases in my own list lived almost wholly on fluids, and averaged seven days each with the tube in. I also note that in the 206 cases of Dr. Bleyer, with the excellent result of 33 per cent. recoveries, "feeding is done in the recumbent position through a nursing bottle." It further occurs to me to suggest that perhaps the excellent method of treatment practiced by Dr. Ingals—the hydragogue effect of the calomel, together with the total restriction of fluids, except ice—may account for the absence of bronchial catarrh in his later cases, more than the freedom from fluids entering the tube.[7]

[4] "Feeding After Intubation of the Larynx," by Jos. O'Dwyer, M.D. Read June 2, 1887, before the New York Academy of Medicine.

[5] New York Medical Journal, July 4, 1885.

[6] "Intubation of the Larynx," New York Medical Journal, July 2 and 9, 1887.

[7] Before intubation has been necessary in cases of threatened croup I have hit upon the idea of promoting secretion in the pharyngeal and neighboring glands, besides keeping the parts con-

It is unnecessary for me to attempt to show that better results would follow the definite solution of the problems here propounded. If aspiration, as I believe, is accountable for a large proportion of these pulmonary complications, then not only is a much earlier intubation necessary, but further counteractive measures may perhaps prove of great benefit, such as, for instance, compelling the patient, after intubation, to inhale compressed and breathe out into rarefied air, which would be the opposite of the cause of his danger.

However, my paper has already been too long extended, and I close by expressing the hope that I have presented, though ever so poorly, something that will stimulate some of you to clear up this very difficult problem and make this lately introduced but wonderful operation of intubation of the larynx a still greater boon to the afflicted.

DR. E. FLETCHER INGALS, of Chicago, was interested in the inventions of the author of the paper. He had been bitten because of the use of an imperfect gag, and, therefore, was peculiarly interested in any instrument that would prevent such an accident. He had for two years used Goodwillie's gag, but recently had used a very simple and effective instrument devised by Dr. Henrotin, of Chicago. The gag, which he showed to the Section, would be found to enable the operator to dispense with one assistant, and could not be displaced by the patient. He had used it frequently in operations in the naso-pharynx and liked it very much, because of the ease of insertion and the certainty that it could be easily retained by an assistant. He had never seen, and never expected to see, a patient, excepting one affected by lock-jaw, in which there was any difficulty in opening the mouth if a thin, flat tongue depressor or a spoon handle was slipped behind the edge of the upper teeth and worked gently but steadily back along the roof of the mouth until the patient gags. He stated that pneumonia from aspiration of food was commonly feared, but there seemed to be no post mortem evidence that it ever occurred. He formerly withheld fluid from little patients wearing the laryngeal tube, and, he believed, with benefit to the disease, though the treatment was not popular on account of the piteous pleading of the child for water during the first forty-eight hours. Since the adoption of the method of giving fluids with the mouth lower than the trachea he had given fluids as much as desired by the patient, without fear of its passing into the trachea. It was not necessary to place the child's head 45° below the horizontal line, but merely to have the head below the trachea. Sometimes the child swallowed best when on its face, sometimes when on its back or side. A common way was to allow the patient, when taking fluid, to lie on the nurse's lap, with the head hanging backward.

NOTE.—The publication of the foregoing paper and discussion has been delayed owing to the loss of one of the wood cuts.—ED.

REPORT ON THE METEOROLOGICAL CONDITIONS AND THEIR RELATIONS TO THE EPIDEMIC INFLUENZA, AND SOME OTHER DISEASES IN CHICAGO DURING THE SIX MONTHS ENDING MARCH 31, 1890.

Read in the Section of State Medicine of the American Medical Association, May 20, 1890.

BY N. S. DAVIS, M.D., LL.D.,
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Early in the last quarter of the year 1889, epidemic influenza or la grippe was reported as prevailing in Russia or northern Europe, and before the end of the quarter it was prevailing to some extent in almost every country in Europe, and in many parts of our own country. This shows a rapidity of diffusion equaled perhaps only by the epidemic of 1847, which is represented to have invaded the whole of Europe within the period of six weeks. On the other hand, the epidemic of 1831–3 was six months in reaching the same degree of diffusion. The first cases of the recent epidemic recognized in Chicago appeared during the last week of December, 1889, when one death from the disease was reported to the health office. During the following month, January, 1890, the number of fatal cases reported was sixty-four; in February, thirty-seven; and in March, seven. The disease thus reached its climax during the first three weeks of its prevalence, and had really ceased in six weeks more. The coincident prevalence and fatality of acute diseases of the respiratory organs, typhoid fever, and of the mucous membranes of the digestive organs, will be seen by the following comparison of the deaths in Chicago during the six months ending March 31, 1890, with those of the six months ending March 31, 1889. To make the comparison fair I have not included the death returns from the ten new wards annexed to the city since March 31, 1889.

The following table shows the number of deaths in the old twenty-four wards of the city of Chicago from the several diseases named during the six months ending March 31, 1889, and 1890 respectively:

stantly cleansed from deposit, by allowing the affected youngsters to practice the unseemly, but to them agreeable occupation of chewing gum. In two cases this seemed to be an effectual preventive, in one of which half a cup of fibrin, mucus and saliva, which had been washed over into the stomach, was vomited. Maybe we may yet combine our germicides with this congenial and simple occupation for children, and thus in a measure prevent the diphtheritic deposit. I mention it as a new field for experimentation.

	1888.			1889.			
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Total.
Bronchitis	43	32	95	115	90	84	459
Pneumonia	69	62	114	128	111	145	629
Influenza	.	.	.	.	.	.	.
Typhoid fever	46	40	43	30	21	15	195
Cholera infantum	20	10	3	2	1	2	38
Diarrhœa	10	3	1	3	2	5	24
Dysentery	17	6	1	.	.	1	25—1,370

	1889.			1890.			
Bronchitis	47	49	84	186	118	130	614
Pneumonia	74	86	134	414	236	226	1170
Influenza	.	.	1	64	37	7	109
Typhoid fever	55	55	28	42	109	82	371
Cholera infantum	35	11	5	13	18	3	85
Diarrhœa	10	10	4	11	15	12	62
Dysentery	21	12	11	18	27	10	99—2510

In examining the details in these tables, it will be seen that the appearance of the epidemic influenza in the latter part of December, 1889, was accompanied and preceded by a moderate increase in the number of deaths from pneumonia, cholera morbus of infants, diarrhœa and dysentery, while its progress through January, February and March, 1890, was accompanied by so rapid an increase in the prevalence of those diseases and in typhoid fever, as to more than double their mortality as compared with that of the corresponding months of the preceding year. Indeed, during the month of January, 1890, when the influenza was at its climax, the deaths from pneumonia were more than three times as numerous as during the same month of 1889, and the intestinal affections were more than six times as numerous. The figures show a marked increase in the number of deaths from bronchitis, though in much less ratio than from pneumonia, while the ratio of deaths from typhoid fever was only moderately increased during the climax of the influenza epidemic, but was greatly increased during the decline through February and March. In fact the cause or causes giving rise to the epidemic influenza appeared to so influence the human system as to lessen its resistance to the action of morbific causes generally, and hence there was an increase in the prevalence and fatality in nearly all forms of acute disease whether general or local. The cases diagnosticated as influenza by the profession presented a great variety of symptoms. The only symptoms that could be regarded as uniformly present in any stage of the disease, were rigors followed by some fever; severe pains in the head, back and limbs; and decided sense of weakness at the commencement of the attacks; and even these varied much in their intensity in different cases. In not more than one-third of the cases was there decided congestion of the mucous membrane of the air passages causing coryza, sneezing, discharge from the nostrils, and bronchial cough characteristic of typical influenza. In quite as large a proportion of the cases, the air passages remained free from irritation, but nausea and sometimes vomiting and diarrhœa with abdominal pains were present from the beginning. The remaining cases amounting to 25 or 30 per cent. of the whole presented only chills followed by two or three days of pyrexia, severe pains, and decided muscular weakness with loss of appetite. Many of these, however, continued to complain of weakness and soreness of the muscles, and frequent shifting neuralgic or rheumatic pains for several weeks. It was chiefly in the first group of cases that pneumonia was met with as a serious complication or as a sequel; while cases in the second group were more frequently followed by typhoid fever, or a persistent intestinal catarrh.

Etiological Considerations.—The nearly simultaneous appearance of the recent epidemic over large districts of country, and its sudden attack of many individuals in a community on the same day, belonging to different classes of society and having had no personal contact with each other or with any previous cases of the disease, renders it impossible to explain its origin and spread from contagion and personal intercourse. When a disease thus suddenly attacks its victims in various parts of a city during the same twenty-four or forty-eight hours, the victims being limited to no one class, age or sex, we are compelled to look for the efficient cause or causes in some vehicle or agency to which all are exposed. Only two such vehicles are known to exist in Chicago, viz.: the atmosphere and water. The whole population, rich and poor alike, receive their supply of the latter from lake Michigan through the tunnels and pumping works.

Since the enlargement of the Illinois and Michigan canal connecting the Chicago river with the Desplaines by which, with the aid of pumping works, the sewage of the city is during the greater part of each year, prevented from flowing into the lake; the water supplied to the inhabitants is of good quality except for a limited time after the usual spring and autumn freshets, during which the current in the river resumes its natural course and sweeps a large amount of accumulated deposits into the lake. On these occasions the contamination of the water of the lake often extends far enough to reach the inlet of the tunnel and is brought back through the hydrants for every family's use. Usually these periods have been of brief duration. But owing to the inadequency of the pumps connecting the river with the canal or their inefficient management, a much larger amount of river water and sewage was allowed to flow into the lake than usual during all the months of December, January, February, and March. This was proved by repeated examinations of the water taken from the hydrants in different parts of the city by competent chemists and microscopists. Professor J. H. Long, of the Chicago Medical College Laboratory, who has made frequent examinations

of the city water supply for seven or eight years past, states that the hydrant water usually yields from .005 to .010 free ammonia per million parts of water, and from .060 to .090 parts of albuminoid ammonia when in average good condition. But his examinations showed that the water during January and the first part of February, 1890, contained from .200 to .255 parts of free ammonia per million parts of water, and from .136 to .183 of albuminoid ammonia. During the latter part of February the pumps lifting the water from the river into the canal and carrying it from the lake, were repaired and made to do much more efficient work. In consequence of this the several analyses made by Professor Long from March 6 to the 22d, showed free ammonia varying from only .009 to .016, and of albuminoid ammonia from only .072 to .096 parts in the million.

Drs. Robert Wahl and Nevins commenced repeated microscopic examinations of the hydrant water from different parts of the city during the latter part of January, 1890, with the following results: Jan. 21, 1,146 microörganisms of six varieties in a cubic centimetre of water; Feb. 13, 1,608 of seven varieties in the same quantity of water; Feb. 24, 1,321; March 21, 462, and March 31, 878 of six varieties. The natural or uncontaminated water of Lake Michigan contains only from 50 to 150 microörganisms to the centimetre, and the best authorities claim that water to be fit for domestic use should not contain more than 200 microörganisms to the centimetre.

It is thus seen that during the period occupied by the recent epidemic of influenza and the coincident high ratio of mortality from pneumonia, typhoid fever and gastro-intestinal affections, the water supplied to the inhabitants was both chemically and bacteriologically impure in a high degree.

In studying the atmospheric or meteorological conditions in detail I find some items worthy of careful attention. From the records kindly furnished from the U. S. Signal Service Station in Chicago I take the following comparison of mean monthly temperature for the six months ending March 31, 1890, with the corresponding months ending March 31, 1889:

	1889.			1890.	
October.	Nov.	Dec.	Jan.	Feb.	March.
49.4°	38.5°	40.6°	30.8°	32.4°	29.5°
	1888.			1889.	
48.4°	40.9°	31.3°	28.4°	19.1°	36.5°

Dec., Jan., Feb., 1889, 1890, 34.6°. Average mean, 36.8°.
Dec., Jan., Feb., 1888, 1889, 26.2°. Average mean, 34.1°.

While these figures show the average mean temperature for the six months ending March 31, 1890, to be only 2.7° above the average mean for the six months ending March 31, 1889, the average mean temperature of the three epidemic months, December, January, February, 1890, is 8.4° above the average mean of the same months of the preceding year. And in comparing the extremes of the temperature of the three epidemic months with the corresponding months of the preceding year, I find the average maximum of the former is 61.6°, the minimum 4.3°, and the average maximum of the latter 51.6°, and average minimum 8.3°.

The comparative precipitation of water was 33 per cent. greater the three epidemic months than during the corresponding months of the previous year, thus combining an excess of moisture with excess of temperature.

During the months of October, November, December, 1889, and January, 1890, the prevailing atmospheric currents were from the southwest and comparatively light, the greatest velocity gained being 42 miles per hour on January 8. During February the prevailing direction of the currents was still from southwest, but the aggregate velocity for the month was increased 33 per cent. In March the prevailing direction was changed to the northwest, with severe cyclones in several parts of the country, the highest velocity attained at Chicago being 68 miles per hour on the 27th, and the aggregate distance traveled during the month 13,806 miles. During nearly all the month of December and a part of January the atmospheric currents were not only light, but the air throughout the city was so filled with smoke and aqueous vapor as to render the days very dark, so much so that many places of business had to be lighted, and one day not only business places and private residences, but the streets required artificial light throughout the day. The prevalence of southwest winds during the months of December, January and February not only favored the flow of the contaminated water of the river into the lake, but, coupled with the unusual high temperature, it was bringing the atmosphere from over a wide and rich prairie country filled with the products of vegetable decomposition into all parts of the city.

The first days cold enough to either dry the atmosphere or destroy the organic materials accompanying decomposition were on the 21st, 22d and 24th of January, when the epidemic period had reached its full climax, and from which time it began to decline.

The atmospheric conditions throughout December, January and February in the city indicated an almost entire absence of ozone and hydrogen peroxide, and the presence of an unusual amount of free and albuminoid ammonia. From all the foregoing facts it is apparent that for six or eight weeks before the appearance of any cases of epidemic influenza in Chicago, and during the continuance of that disease, both the atmosphere and water used by the inhabitants were impregnated with an unusual amount of free and albuminoid

ammonia, and the latter with an abundance of microörganisms through admixture of impure water from the river, while the atmosphere maintained an average mean temperature from 8° to 9° F. above the average for a series of years. Similar coincident unfavorable conditions of the atmosphere and water, though in a less degree, have occurred in other years and have always been accompanied by an increased prevalence of gastro-intestinal disturbances, typhoid fever and pneumonia, and they undoubtedly imparted increased virulence to the specific cause of the more generally prevailing epidemic of influenza. What that specific cause was, is still unknown, notwithstanding the diligent observations of hundreds of skilled microscopists on both sides of the Atlantic ocean. That it was diffused in the atmosphere hardly admits of a doubt, for reasons already given; and whether a microörganism, a ptomaine or chemical product, I think the pabulum on which it feeds and multiplies will be found in connection with the free and albuminoid ammonia, more or less of which are almost always present in the atmosphere, as shown by the recorded observations of Prof. J. H. Long for every day in the year ending August 31, 1883.[1] The extraordinary prevalence of pneumonia in Chicago during the month of January, 1890, certainly could not be attributed to intense cold, dry air, as claimed to be generally the case by Dr. H. B. Baker, in an interesting paper presented to this Section last year; for neither in December nor during the first twenty days in January had there been even a single day of severe cold and dry air in Chicago. Neither was the unusual prevalence and fatality of pneumonia limited to Chicago during the month of January, nor the coincident high temperature for that season of the year.

The Signal Service Bureau reported the average mean temperature over the whole country east of the Rocky mountains during the months of December, 1889, and January, 1890, as being from 5° to 13° F. above the average for a series of years. In Boston it was 10°, New York 10°, Washington 12°, Cleveland 13°, Chicago 9°, and St. Louis 10° above the ordinary average; and the official health reports of all these cities show an extraordinary mortality from pneumonia and acute affections of the respiratory passages, especially during the last named month; and in Chicago, although the average or mean temperature of March was decidedly lower than either of the three preceding months, the number of cases of pneumonia diminished, and still more rapidly in April. A careful examination of the records regarding the noted epidemics of influenza in London during the last forty-five years, by Sir Arthur Mitchell, M.D., and Dr. Buchan (see *British Medical Journal*, April 12, 1890), not only show that such epidemics have been accompanied by a large increase in other inflammatory affections of the respiratory organs, but that they also have prevailed most at the same seasons of the year, namely, between the months of November and April. Their statistics further show that the highest ratio of prevalence and fatality of both the influenza and the associated respiratory diseases was neither during nor directly following the periods of most intense cold, as Dr. Baker's theory would require. On the contrary, during the last half of December, 1889, and all the month of January, 1890, the mean temperature was much above the mean for a series of years, while during February and March it fell below the mean; yet the epidemic was at its maximum during January, which is strictly parallel with its prevalence in this country and at the same time. The same writers also note the fact that during the first four weeks in January, when the epidemic was at its maximum in London, only 343 deaths were reported as from the influenza, while the total mortality from all diseases was 10,065, or 2,258 above the mean rate for the same weeks for the previous ten years, the increase being chiefly from diseases of the respiratory, circulatory and nervous structures and rheumatism. These facts are also strictly parallel with what I have already shown to have taken place in Chicago and other parts of this country; and as they have been observed in a greater or less degree in connection with all the more important epidemics of influenza, or la grippe, they very forcibly suggest the existence of some close relationship, if not identity, of causation between it and endemic pneumonia and catarrhal affections of the mucous membranes generally.

Diseases that are known to be caused by pathogenic germs, ptomaines or specific viruses, are seldom accompanied by any marked increase of mortality from other acute diseases, but more frequently the reverse. The fact that the recent epidemic has passed at a period of great activity in microscopic research, both in Europe and America, without any satisfactory identification of a microörganism as its essential cause, affords at least strong presumptive evidence that such cause does not exist. On the other hand, remembering that the epidemic influenza has pretty uniformly been accompanied by an increased mortality from acute diseases generally, with only a small mortality attributed directly to it, while it is accompanied and followed for a considerable time by great impairment of hæmatosis, innervation and muscular strength, the question is again suggested whether the efficient cause does not consist in some modification of the molecular arrangement and properties of those organic products designated as free and albuminoid ammonia, the inhalation of which impairs the function of the corpuscular elements of the blood and excites

[1] See Journal of the American Medical Association, Vol. ii, pp. 169-170, 1884.

irritation in the nervous, pulmonary and mucous tissues of the body. Such a condition would render the system more susceptible to the action of morbific causes generally, with less vital resistance, and thereby account for the marked increase of mortality from all diseases. When another epidemic appears, it is to be hoped that the elements of the atmosphere will be subjected to the most rigid chemical, microscopic and spectral scrutiny.

One more item connected with the recent epidemic is of practical importance, namely: the frequency of relapses and the unusually protracted nervous and muscular weakness that followed a large proportion of the cases. I had the opportunity of observing the characteristics of each of the epidemics in 1847–8, 1857–8, 1872–3, in neither of which was there so great a variety of symptoms and complications as in that of 1889–90. And I am sure that since the subsidence of the recent epidemic in Chicago I have been called upon to prescribe for a larger number of patients complaining of extreme weakness and inability to resume their usual occupations, than after all the three preceding epidemics combined.

The most constant symptoms in these cases were, a great sense of exhaustion on making any physical exertion, a soft weak pulse, cool extremities, frequent perspiration with trembling and sense of inability to breathe, indicating great impairment of the vaso-motor, cardiac and respiratory nerve functions. In many of them there was either paleness or leaden hue of the surface, loss of appetite, mental despondency, irregular pains or hyperæsthesia frequently changing from one part to another, and in some instances anæsthesia or defective sensibility. All of them referred the commencement of their trouble to what they called an attack of "*la grippe*" in January or February, characterized by chilliness, fever, and severe pains, for which they had been treated with efficient doses of antipyrin, acetanilide or some one of this group, and some quinine. The pyrexia and severe pains had been promptly relieved, and though the latter often returned they were as often relieved by the same remedies, but leaving the patients in the debilitated condition I have described. That the antipyretic remedies just mentioned were very extensively used during the prevalence of the epidemic, not only in regular practice but in irregular practice as well, and by patients without the advice of any physician, is shown by the fact that the supply in the market was so rapidly diminished during January and February as to cause a marked increase in the price of those drugs. How far the consumption of these remedies contributed to the extraordinary and protracted physical debility that has followed, is a question of great importance. That in antipyretic doses, they diminish the oxygenation and decarbonization of the blood, retard the metabolic or molecular changes in the tissues, and depress the vaso-motor, cardiac and respiratory nerve centres, is fully proved both by direct experiments on animals and by clinical observation, as I have shown more at length in another paper. Thus Lepine in experimenting on dogs with acetanilide, produced in them trembling, apathy, weakness, diminished temperature, cardiac weakness, and loss of excitability of peripheral nerves. The blood became loaded with methæmoglobin and on analysis showed great deficiency in oxygen. Binett produced similar results in experimenting on cats and rabbits with exalgine (see *British Medical Journal*, February 8, 1890). Henocque in experimenting with the spectroscope found that when these remedies, antipyrin, acetanilide, exalgine, etc., were present in the blood the results were reduction of the oxyhæmoglobin and the production of methæmoglobin with loss of oxygen, thereby asphyxiating the corpuscles. Very recently Dr. John D. Kales has obtained the same results by a series of experiments with the spectroscope in the laboratory of the Chicago Medical College (Medical Department of the Northwestern University).

It is very evident that the liberal use of remedies that relieve pain and reduce temperature by direct impairment of the function of the corpuscular elements of the blood and tissues and of the nervous centres of animal life, could not fail, especially when frequently repeated, to produce great and protracted debility, and sometimes to contribute much toward the development of a fatal collapse, one or two instances of which came under my observation.

Dr. C. A. Lindsley approved the paper, but differed as to the effect on intestinal diseases. In his locality it was confined to the air passages. Noah Webster describes as early as 1789, or 100 years previous to the epidemic under discussion, almost identically the same disease, though no neuralgic symptoms are mentioned. Speaker stated that the epidemic began in New Haven about December 25, 1889, and suggested that others give dates.

On motion of Dr. H. B. Baker, it was requested that the exact dates of the appearance of the epidemic in various localities be noted as suggested by Dr. Lindsley.

Dr. A. N. Bell stated that he had observed that the disease had proved most fatal in cases where there was the greatest depression, or where the surroundings were unhealthy and the vitality of the patient was lowest.

Dr. W. L. Schenck, of Kansas, observed more symptoms of neurotic origin than those of air passages, and treated it as a neurosis. In his State it was sporadic during the last two weeks of December, and epidemic during the first two weeks of January.

DR. RUTHERFORD, of Texas, stated that it began in Rio Grande City January 15, and greatly similated denque. Mortality in Houston great. Gastric catarrh a fatal complication.

DR. J. G. HOPKINS, of Thomasville, Ga., said that the cases in Georgia were complicated with intestinal troubles, that it was an unusual dry season, but that there were no cases of pneumonia, and no deaths in his locality.

DR. ATCHISON, of Nashville, stated that the principal characteristics of the disease in Nashville were extreme prostration and low temperature, no inflammatory complications. Mortality slight.

DR. T. G. HORN, of Colorado, expressed a belief that locality had much to do with characteristic symptoms. In Colorado phthisis was a fatal complication.

DR. J. F. HIBBARD stated that in Indiana, the disease first appeared December 25, and that there were several varieties of the trouble; about one-fourth of the population were affected, but the death-rate did not exceed one in 1,000.

DR. J. T. REEVE, of Appleton, Wis., noted that the disease appeared December 24 in Milwaukee, and that three-fourths of the population suffered from it; did not think the deaths exceeded one in 1,000.

DR. J. COCHRAN, of Montgomery, Ala., stated that the first appearance was in Decatur, Ala., and that a greater number of cases appeared in the pine countries, and sparsely settled districts.

DR. J. S. PLUNKETT stated that many cases which he had observed were complicated with constipation followed by diarrhœa.

DR. A. Y. FIELD, of Des Moines, Ia., believes that impure water should be eliminated as a factor in the causation of the disease, and that the disease has some self-propelling power, and is not dependent on atmospheric influences. The clinical history was that of an ordinary cold with marked prostration.

DR. W. H. LONG, M.-H. S. asked if pneumonia was not the usual complication in fatal cases?

DR. C. H. FISHER, of Rhode Island, stated that the disease appeared in his locality December 20, and that the nasal and pharyngeal symptoms were most marked.

DR. N. S. DAVIS then closed the discussion by stating that the disease was not recognized in Chicago previous to December 24. He did not wish to be understood as attributing the epidemic to impure water, but referred to the existence of unusually impure water in Chicago at this time as a coincidence.

DR. T. MORE MADDEN has received from the Texas Medical College the honorary degree of Doctor of Medicine.

A STUDY OF THE SOCIAL STATISTICS OF 4,663 CASES OF ALCOHOLIC INEBRIETY.

TREATED AT THE INEBRIATES' HOME, FORT HAMILTON, L. I., FROM JANUARY 1, 1880, TO DECEMBER 31, 1888. INCLUDING STATEMENT SHOWING RESULT OF TREATMENT, ETC.

Read in the Section of Medical Jurisprudence, at the Forty-first Annual Meeting of the American Medical Association, May, 1890.

BY I. D. MASON, M.D.,

CONSULTING PHYSICIAN INEBRIATES' HOME, FORT HAMILTON, L. I.

Nativity, sex, age, temperament, climate, occupation, custom and social conditions, are important factors in the etiology of alcoholic inebriety, outside of the well-known causes of preceding or accompanying disease or injury and heredity, and also, to a certain extent, are to be taken into consideration in the treatment of all cases of inebriety.

Nativity of the 4,663 cases was as follows: United States, 3,186; Ireland, 826; England, 203; Scotland, 77; British Possessions, 73; Germany, 109; other nationalities, 44; not recorded, 145. The United States naturally compose a large majority, as we find in asylums of other countries, inhabitants of those countries as inmates will be in excess of all others; but we must acknowledge that the nervo-sanguine temperament of the American is peculiarly susceptible to the evil effects of alcohol, and that, other things being equal, the average American would sooner succumb to inebriety than his transatlantic brother. Ireland takes the lead among foreign nationalities. Next in order we have England, Germany and Scotland, the lesser nationalities occur in insignificant proportions, and do not call for special comment.

As a matter of *racial importance* I cannot recall a single instance of acute or chronic alcoholic mania in the negro, among the several thousand inebriates who have passed under my notice during a period of nearly twenty-four years.

In reply to a series of questions, Dr. Landon B. Edwards, of Richmond, Va., informs me "that the negro is rarely the subject of chronic mental or nervous disease, arising from alcohol, although it is rare to find a negro, male or female, who does not drink. Alcoholic liquors are preferred, and yet the laboring negro, as a rule, is not a drunkard." He attributes this to the outdoor life, simple habits, and low grade of nervous organization of the negro.

Climate. As to the influence of climate on inebriety, we have no special statistics to show, but it is a popular impression, that the inhabitants of low levels, especially near the sea-coast, are more apt to be intemperate than the dwellers on the higher plateaus, table lands, and mountainous districts. The influence of certain barometric conditions, dependent upon atmospheric changes, in influencing and producing certain conditions of the nervous system, is familiar to all who have made this subject a special study.

It is also a well-known fact that in malarious districts, the depressing effects of malarial cachexia are counteracted by the free, habitual use of quinine, strychnine, coffee and other nerve stimulants, among which alcohol predominates. No one will dispute the fact that an unhealthy, enervating climate is more apt to produce intemperance and consequent inebriety, than a climate having just the opposite characteristics. Climate, undoubtedly, is one of the factors in the production of inebriety, as it is of other diseases.

Sex.—There were 4,084 males and 579 females. The Fort Hamilton Asylum is intended more especially for males, hence the small proportion of females. It has no provision for females of the better class; the female inmates were from the middle and lower classes of society—but the inference must not be drawn that inebriety does not prevail among females of all classes, or that the above is a fair relative proportion of the inebriates of both sexes. In this country, undoubtedly, the male inebriate far exceeds in numbers female inebriates. But this is not universally the case. In England[1] and Wales the habitual inebriate females already convicted to the habitual inebriate males already convicted are as three to one. In England, he believes, especially among the higher classes of society, inebriety prevails to a greater extent among females than in the same class and sex in the United States.

Social Conditions.—The married male inebriate exceeds in numbers the unmarried male inebriate. There were 2,098 married, 1,744 single, male inebriates; and especially does the married female inebriate in far greater proportion exceed the unmarried female inebriate. There were 401 married female inebriates and only 48 single female inebriates. Must we conclude that, other things being equal, the married life predisposes to inebriety? It would seem so, in the case of females at least. The married female has a much greater strain upon both her mental and physical constitution than the unmarried. A fact substantiated in the reports of our Asylum further shows, that unmarried males are more frequently subjects for readmission than the married; that is, that they are more apt to relapse. The reverse is true in regard to females. Married females are more apt to relapse than unmarried females. The latter are not apt to relapse; if they do, it is the exception to the rule. The spinster, then, is the most temperate member of society. There were 242 widowers and 130 widows also recorded.

Approximation of Ages.—The ages of the majority of the cases treated were from 20 to 60, the greater proportion from 30 to 50, and of these considerably over one-half were between 30 and 40 years of age. Below the age of 20 and above the age of 60, comparatively few. The oldest patient was 73 years of age, and the youngest 18 years. We must conclude that the great majority are of that period of life which is the most effective for usefulness and attainment under normal conditions. In other words, alcohol cripples and handicaps a great majority of inebriates at the most useful period of life. Another fact is, that inebriates may exceptionally, but do *not* as a rule, attain to a *long life*. About one in 385 of inebriates, whom he treated, reached the age of 70 years.

Occupation.—Let us now consider the relation of inebriety to occupation. Imagine a community of 4,663 adult inebriates, embracing every trade, employment or profession. Excluding 234 males who had no occupation, and 562 females, 275 of whom were unemployed, and the balance either domestics or housekeepers, we have about 3,867 males who were variously occupied, representing two hundred trades, professions, commercial, mercantile or agricultural occupations.

We find directly engaged in the *liquor business* 71 bar-tenders and 51 liquor dealers. The indoor trades exceeded the out-door trades. Among those engaged in the out-door occupations, inebriety seemed to affect most those whose business especially exposed them to irregular hours and inclement weather,—teamsters, cartmen, coachmen, carmen, conductors, drivers. One hundred such are recorded. The next in frequency were butchers (45); next stone-cutters (28); next plasterers (26); next coopers (19). The other occupations being at or below the latter figure, and running at or about the same average or percentage. Among in-door occupations we find painters (121) in the majority. The painter handles alcohol, turpentine, etc.; his occupation is not a healthful one; he is apt to contract diseases incident to it, as turpentine poisoning, lead colic, and nervous diseases arising from lead poisoning, as wrist drop, or paralysis of the extensor muscles, etc.

Next in order come printers (58) and pressmen (58). Long hours, extra work, night work and an employment that demands great rapidity, and probably more mental and physical strain than the average occupation, may account for the fact that the printer and the pressman take the second place.

The other indoor trades are in the following order: Shoemakers (45), plumbers (39), tailors (38), hatters (34), tinsmiths (31), waiters (28), photographers (27), carpet-weavers (22), Glass-blowers (21)—the remainder of the in-door trades at or below 20.

The greater part of the various occupations were from mercantile or commercial life. At least 1,200 or 1,300, or about one-third of the entire number belonging to one or the other other of the above classes in the following order: Clerks (565), merchants (283), bookkeepers (100), salesmen (152), agents (78), brokers (44), the balance

[1] Inebriety, by Dr. Norman Kerr, London, Eng.

being made up of canvassers, contractors, railroad officials, bankers, publishers and superintendents, etc.

In agricultural occupations we note, farmers (34) and gardeners (15).

Professions.—Four hundred and seventy-seven, or about one-eighth of the whole number, belonged to the professions, as follows: Physicians (115), lawyers (111), engineers (58), druggists (43), journalists (39), artists (32), students (21), reporters (19), clergymen (10), actors (9), the balance being in small proportion, architects, accountants, actuaries, notaries public, chemists, assayers, army officers, dentists, editors, etc.

Why physicians are in excess of other professions is due to the fact that they lead very arduous lives, both physically and mentally, with irregularity as to sleep and diet, rest and recreation; but there is another fact also, that the physician would be more likely to appreciate and avail himself of the asylum privileges for the treatment of his inebriety than any other of the professions.

In considering the various avocations the usual average relation of the occupation or profession to a normal condition of society must be considered. In this way only can we get at the fact as to whether any one calling exceeds the other in a tendency to lead to inebriety.

Results of Treatment, etc.—Total cases, 4,663; still under treatment, 1,283; total cases discharged and to be accounted for, 3,380; doing well, 1,465, 43 per cent.; lost sight of, 662, 29½ per cent.; unimproved, 555, 16½ per cent.; readmitted, 556, 16½ per cent.; died, 81, 2½ per cent.; transferred to other institutions, 61, 2 per cent.

Doing well.—By this we mean the patient is restored to society, to his business and social relations. Exclusive of *death* and *transfer*, the percentage will be nearer 43 per cent. It must also be considered that the inebriate on an average is not brought to us for treatment until after his inebriety has existed *ten* years, his system broken down, and oftentimes the subject of incurable disease, the result of his inebriety or some disease or injury with which his inebriety is complicated, and which may have preceded and been the cause of it. Again, not only as inebriates apply at a late period for treatment, but only about one-quarter of those who do apply remain over six months, while three-fourths remain at periods varying from one to four months, and the large majority less than the legal limit of three months, so that if we were to apply the same rule that is applied to other diseases which are submitted to us to be cured, that is, having the patient brought to us at a *reasonable period after* the disease tendency has manifested itself, and having also the patient *remain under* our care a *reasonable length* of time for treatment as each case may demand, it would be easy to see that our ratio of cures would be 75 or 80 per cent., instead of 43 per cent. as they now are, which is nevertheless a good showing considering the disadvantages we have had to contend with. We are confident that in the future under proper conditions that at least three-fourths of the inebriates treated in our asylums will be cured.

Thirty-six cases were *lost sight* of, or *unimproved*, but this does not mean they will not be heard of again; a certain proportion will return to our institution, and of these a number will be cured. Some of our most successful cases are those who have been in the asylum at different periods under treatment. Of the balance, some will die, others will move away, others go to similar institutions elsewhere located. We shall not make any comments as to *deaths* except to call attention to the *remarkably* small percentage, which is about equally divided between those who died outside of the asylum and those who died in the asylum. Some 61 were transferred to other institutions—30 to the *lunatic asylum*. We observe the tendency of inebriety toward insanity. The great majority of inebriates carry unevenly-balanced minds; they are on the verge of insanity all the time, and not unfrequently pass over the line. In any inebriate asylum it would be safe to assert the large majority of inebriates, at least for the first few weeks after their entrance into the asylum, are in a mental condition, that to say the least, is not normal. The above 30 transfers were marked cases of lunacy, acute or chronic mania, which were not suitable for an asylum of our character. The moral effect and the law of association forbid that the inebriate of weakened mind and body should be associated with insane persons. The tendency of every inebriate is that way, and such association would only precipitate the event. This is the principal argument against the incarceration of insane persons and inebriates in the same institution, although there are other arguments equally effective. A certain proportion of persons were brought to the asylum suffering from various diseases or infirmities that rendered them unfit subjects for our asylum. Of these some 31 were transferred to hospitals or other institutions.

We have thus given a few general observations, resulting from a study of these special statistics. We have not by any means exhausted the subject, but we trust we have added some points of interest and importance, not only to the etiology of inebriety, but also some indications for its most successful treatment.

THE Paris Municipal Council has just voted 270,000 francs ($54,000) for the construction, on ground cut off from the Mont Parnasse cemetery, of a sleeping refuge for pregnant women in a state of destitution.

THE MEDICO-LEGAL RELATIONS OF PARALYSIS FROM BRAIN DISEASE.

Read before the Section on Medical Jurisprudence at the Forty-first Annual Meeting of the American Medical Association, Nashville, Tenn., May, 1890.

BY DANIEL R. BROWER, M.D.,

OF CHICAGO, ILL.,

PROFESSOR OF DISEASES OF THE NERVOUS SYSTEM, DIDACTIC AND CLINICAL, IN THE WOMAN'S MEDICAL COLLEGE; PROFESSOR OF MENTAL DISEASES AND LECTURER ON THE PRACTICE OF MEDICINE IN RUSH MEDICAL COLLEGE, CHICAGO, ILL.

Hemiplegia, be it complete or partial, is a frequent and important result of brain disease. Any cause that sufficiently disturbs the nutrition of the psycho-motor centres of the brain, or the motor tracts below these centres, will produce this condition. The severe forms of cerebral congestion, cerebral hæmorrhage, cerebral embolism, cerebral thrombosis, cerebral abscess, cerebral tumor, may be enumerated as pathological conditions producing this paralysis. In the case of hemiplegia following cerebral congestion the duration of the pathological condition is short, and the resulting mental disturbance is slight and not usually of long duration. The extent of the paralysis, its duration, and the resultant mental disturbance depend upon the situation and extent of the pathological lesion. They all produce more or less mental disturbance, such as irritability of the emotions, irresolution of purpose, failure of memory, and interfere with the power of converting words into ideas. The tracts in the internal capsule, through which the conduction of nerve impulses have to travel, are in such close and intimate relationship with the speech centre, directly on the left side and indirectly on the right, that there is more or less disturbance of this function in every case. In some the disturbance is transitory and not very pronounced; in other cases it is of long duration and extreme.

The ordinary onset of hemiplegia, be its cause what it may, is a loss of consciousness. The shock has produced a condition of things so profound that the patient is devoid of all power of expression. In the milder cases, if consciousness is not entirely lost, it is usually more or less impaired. This loss of consciousness may be due simply to the shock to the nerve centres, of a hæmorrhage or an embolus, or to the completion of the thrombosis; or it may be due to the congestion of other territories of the brain, that is the secondary result of cutting off the territory that gives rise to the hemiplegia, from the blood-supply. This congestion of the brain will produce more or less exudation, and this exudation, by pressure and irritation of the cerebral convolutions, will more or less impair the nutrition of the cells of the brain and the nerve fibres connected therewith. The secondary anæmia that ensues must be followed by more or less venous congestion, and the venous congestion must have as its secondary result a similar condition of exudation, so that the exudates from the active congestion and the exudates from the passive congestion must more or less impair the functional power of the cerebral hemispheres; so that it is not surprising that in every case of hemiplegia there is in the beginning more or less disturbance of the mind. This mental disturbance is characterized by an undue activity of the emotions, by impairment of the intellectual powers, by a dulness of the perceptions, and a lack of will power. In all cases of cerebral paralysis, but especially in the cases of right hemiplegia, there is more or less inability to properly express mental activity either in speaking or writing. The wrong words are used, and very frequently the wrong idea. The words used may not be in accordance with the idea intended to be expressed, so that errors of a serious legal character may occur out of this condition of the cerebral mechanism. They may know perfectly well what they desire to say or to write, but the disturbance in the mechanism of speech and of writing may cause them to write or to say things that they did not intend to say, and thereby seriously violate their normal legal relations.

Our attention has just been called to a case of right hemiplegia in a gentleman possessed of considerable property, with a wife and daughter to whom he had always been most affectionately attached. He made a will, and in that will he bequeathed all his property to his three brothers, already comfortably well off, and with whom he had had for years very little, if any, intercourse, and that of a not very amicable nature, cutting off his natural heirs as far as possible, with whom his relations before and during his paralysis had always been of a most agreeable kind. Just what the condition of mind was that caused this man to commit this breach, it was not easy to determine. Whether he was at that time in a condition of disordered affections, so as to change entirely his natural and reasonable relations to his wife and daughter, and to make unnatural his relations to his brothers; or whether he had, when the will was drawn up, this disturbance in converting into proper language the ideas he intended to convey, and signed the paper without a correct understanding of its contents, is, of course, merely speculation.

I gave the opinion that the will should not stand, that it should be set aside on the ground that the man's mental condition growing out of this paralysis from brain disease, the result of cerebral hæmorrhage, had disturbed his mental condition to such an extent as to make it impossible for him to rightly understand the relations he bore to his family, and to properly convey in language the ideas that originated in his brain.

Such is the profound disturbance of the brain necessary to produce paralysis, and so intimate is the relation of the psycho-motor centres to the emo-

tional and intellectual centres that the paralysis should at least in the earlier stages, raise a presumption of mental impairment, which may be of such a kind and degree as to vitiate a contract or make null and void a will; but as the cases progress the mental equilibrium may be restored even though the paralysis does not improve. The Courts, on the contrary, have repeatedly decided that cerebral paralysis does not raise such a presumption. The Supreme Court of Illinois in Trish *v.* Newell, 62 Ill., p. 201, says: "It is no more a presumption of law that a person rendered unconscious and incapable of mental action by a stroke of paralysis, will continue so for four months thereafter, than that he would so continue when the effect was produced by a wound on the head. Such a result might follow in either case, but the law does not presume that it would in either." In this case the testator was stricken with paralysis when 80 years old, rendered quite, if not wholly unconscious, remained helpless, one side continuing paralyzed, and his powers of speech irrevocably lost. The will was made three months subsequent to the apoplexy. In the Court below the will was set aside, but the Supreme Court reversed the Court below. The Supreme Court of Illinois in Rutherford *vs.* Morris, 77 Ill., (397,) cited and approved the above decision, and in giving its opinion, indulged in a fierce diatribe against medical expert witnesses.

The Supreme Court in Brown *vs.* Ridgins, 94, Ills., 568, again cites and approves this decision, the testator in this case being a woman of 62 years, who had cerebral paralysis with an epileptiform onset, and who made a will nine days after the seizure.

The Supreme Court of Pennsylvania in Landis *vs.* Landis, i Grant's cases, 250, cites and approves this same decision.

In the case of a woman who was stricken with paralysis in June, and again in July, who made a will in September 9, and died on October 2, the Court says that mental incompetency does not follow as of course, and it must be shown *aliunde*.

While the legal responsibility of every case of cerebral paralysis should be judged by its own merits, yet the presumption of mental impairment, possibly to the extent of rendering null and void a contract, or vitiating a will, should be present in every case, and if that will or contract is not clearly reasonable, the burden of proof should be with the defendant. He should be required to show that patient was not of unsound mind at the time of making contract or will.

ON May 21 the Duke of Connaught formally opened the Jubilee Hospital just completed at Victoria, B. C., which has been erected in commemoration of the Queen's Jubilee.

MEDICAL PROGRESS.

MASSAGE IN GYNECOLOGY.—DR. GAUDIN, in *El Prog. Gyn.*—In 1868 Brauel first suggested it as a means of treating uterine affections. It may be used in the so-called external form by frictions, and by relaxations of the abdominal wall, through which the volume and outlines of the uterus may be perceived. This suggests that massage can be used only in cases in which there is little abdominal adipose tissue. The patient should be in the dorsal position, with thighs flexed and knees separated. The rectum and bladder must be empty and respiration must be regular. Kaltenbach has advised that the bladder and rectum be filled with warm water, the vagina tamponed, and that these cavities be quickly evacuated when one is about to make a bi-manual exploration. Such a plan is of advantage in many cases, especially if one is making an exploration for purposes of diagnosis, but it would hardly be suitable for daily use in cases in which massage is to be employed. It is important that the fingers which are to operate in massage be applied with the palmar surface tangential to the diseased organ—that is, they are not to be forced perpendicularly upon the organ. The adominal and vaginal walls may at first show a certain degree of rigidity, but there is always a space in which the finger can be placed in every case which is suitable for this treatment—namely, the fundus of the anterior subpubic space, immediately behind the symphysis pubis. The external hand, therefore, will have its grasp above the mons veneris, the fingers radiating toward the umbilicus, while the index and middle fingers of the other hand will be passed into the vagina. If one finger alone is introduced into the vagina, it may cause either pain or undue excitement. The dorsal surface of the fingers introduced into the vagina should rest against the posterior commissure of the vulva. The movements of friction, pressure, and malaxation should always be slow and regular. The force exercised by the two hands should be in exactly opposite directions—that is, while the external hand should work downward, the fingers within the vagina should work upward. Anteversions of the uterus show better results from massage than any other form of displacement. In chronic metritis, and all other affections which result in hypertrophy of the uterus, the fingers within the vagina should support the uterus while friction is exerted by the external hand upon the posterior portion of the organ, a concentric compression being practiced. If there is infiltration in the circum-uterine cellular tissue, the external hand should fix the organ while massage is practiced by the fingers in the vagina upon the cervix and the anterior and posterior

portions of the uterus. When the uterus is fixed in pathological anteflexion or anteversion, a kind of passive gymnastics should be practiced upon such portions of the organ as may be moved; if atrophy or sclerosis are present, one can only hope for an improvement, but not a cure of the condition. If flexion is the result of adhesive bands caused by pelvic peritonitis, the prognosis will be favorable; massage will produce a decided improvement in the circulation. Massage is contra-indicated in conditions of acute inflammation.

Rigorous antisepsis should be observed in all cases in which this treatment is to be employed. The diagnosis should be exact, and the seat of the lesion carefully determined in every case. The mobility or immobility of the uterus, the existence or non-existence of adhesions, should all be carefully ascertained, and in some cases it will be necessary to use an anæsthetic before a diagnosis can be made. Massage per rectum is advocated by some, but is believed to be impracticable on account of the slight tolerance of such interference by that organ. The uterine affections in which this treatment is indicated are the following:

1. All chronic and atonic conditions of the uterus.
2. Uterine inertia and its consequences—amenorrhœa, dysmenorrhœa, chlorosis, and anæmia.
3. Neuralgia of the pelvis, coccygodynia, oöphoralgia, etc.
4. A tendency to the accumulation of fat in or upon the genitals.
5. It is also recommended by some gynecologists for those nervous or mental disorders, which appear to be reflected from uterine disease—such as hysteria, neurasthenia, hypochondria, etc.; but for such conditions the author believes this treatment uncertain and dangerous.—*Arch. Gyn. Obstet. and Pæd.*

THE SUBCUTICULAR SUTURE.—This is the name given by MR. KENDALL FRANKS to a method of suturing wounds, especially small wounds about the neck and face, where it is desirable, for cosmetic effect, to leave as little trace as possible in the form of a scar. The suture is a continuous one, and fine catgut must be used and a fine curved needle. The needle must be passed horizontally, and at the cut edge of the wound, not at a distance from the edge, as in ordinary suturing. The author's description in the *British Medical Journal*, is as follows: "I begin at a point about a quarter of an inch from the upper angle of the wound. The needle is passed horizontally underneath the epidermis of the skin into the cutis vera, and emerges again from the cutis vera at the angle of the wound itself. It is then passed in a similar manner into the cutis vera alone on the opposite side of the wound, beginning at the extreme angle and emerging at a point a quarter of an inch from it. The catgut is drawn through so as to leave just enough at the first point of entrance to enable it to be tied to the portion of the suture which holds the needle. This forms a starting-point. The needle is again inserted horizontally into the true skin, beginning immediately below the first point of entrance, and comes out again a quarter of an inch lower down; it is then passed similarly into the other edge of the wound at a point corresponding exactly to the last point of emergence on the opposite side, being brought out again a quarter of an inch lower down. This method is continued until the lower angle of the wound is reached." Of course, as the suture is tightened the cutaneous edges of the wound will be brought into close and even apposition. An experience of several years with this method, especially in connection with wounds made for the removal of scrofulous glands in the neck, has satisfied the author of its utility. It also has the indorsement of such well-known men as Dr. Clifford Albutt and Mr. Pridgin Teale. It is but another form of buried suture, and certainly must require very delicate manipulation, a very fine needle, and aseptic catgut in order to insure a successful result. It is well conceived, and does away not only with the blemish of a linear scar in a conspicuous place, but also with the equal unsightliness of stitch marks. As the author remarks, this is not a slight consideration for women or for men with whom occupation or fashion interferes with their allowing the hair to grow in the vicinity of such disfigurements.—*New York Medical Journal.*

VAGINAL EXTIRPATION OF THE UTERUS FOR RETAINED PLACENTA.—A case of this character is reported from the practice of L. ROOSENBURG. The patient, a woman 24 years of age, had borne two children at full term and had aborted once at six months. The midwife removed the placenta with difficulty; later on the uterus was curetted on account of hæmorrhage. On the 24th of March the patient again aborted at the fourth month. The midwife attempted to remove the placenta, but the cord broke off, leaving the placenta *in utero*. A chill followed by fever set in immediately after delivery. These attacks were repeated daily and became more severe; the lochia became foul and scanty and the patient rapidly sank. The author was therefore called in on the 30th of March. On the following day the patient was admitted to the hospital with a temperature of 41.5°, a pulse of 130 and respiration 40. She complained of dyspnœa. On internal examination the os uteri was found to be surrounded by a thick inelastic wall which admitted only two fingers; the placenta could not be felt. After thor-

ough disinfection iodoform gauze was introduced. In the night the temperature fell to 37°, but rose again the following morning, reaching 40.3; pulse 132, respiration 44. On the following morning the tampon was removed. The os had not dilated, but an attempt was made to remove the placenta by means of Volkmann's spoon—this attempt failed. On the following day the patient's condition was still worse, and believing that she could not live twenty-four hours longer under existing circumstances, the reporter decided to remove the uterus through the vagina. This operation having been performed, iodoform gauze was introduced into the lower part of the peritoneum and the vagina packed with cotton soaked in iodoform glycerine. The patient's condition rapidly improved; the ligatures came away in ten days, and in two weeks the patient was able to walk about. The uterus was examined immediately after the operation. Upon cutting halfway through the thickness of its walls a very fetid odor was noticed; a second stroke of the knife divided the placenta and laid open the uterine cavity. The placenta was firmly adherent, was black on its free surface and emitted a horrible odor. At various points placentitis was seen.—*Cent. für Gyn.*

THE THERAPEUTICS OF CHLORALAMIDE.—So many new drugs are being put on the market, that no practical physician can hope to take cognizance of all of them. The Germans manufacture new compounds *ad infinitum*, and have been doing so for years, but only a few have taken and held any recognized place in the therapeutics of to-day. Chloralamide is a comparatively recent one, but it would appear that it has come to stay. In an interesting article on this drug by DR. STEELE, *Pacific Med. Jour.*, he gives the following as its therapeutical indications: Chloralamide is successfully employed in conquering insomnia, and particularly that form denominated simple or idiopathic insomnia, not due to excitement or severe pain. It is, furthermore, possible for the wakeful patient to enjoy several nights of natural sleep after a single dose. The best results occur when the drug is used in insomnia due to nervousness, neurasthenia, hysteria, "spinal disease" or old age; next best when the causes are chronic alcoholism, alcohol excess, cardiac and bronchial asthma, pleuritis, phthisis, pericarditis, arterial sclerosis, organic heart disease, typhoid fever, gastritis, subacute nephritis, ascites, diabetes mellitus and in the morphine habit. It is less effective when wakefulness is due to tabes dorsalis, neuralgia, progressive paralysis, the excitement of insanity, cerebral softening with delirium, melancholia, chronic mania and acute mania. In these conditions, doses of from 30 to 60 grs. are required, providing such doses are tolerated. The drug is useless when the insomnia results from paralytic dementia, maniacal excitement or hallucinations, severe neuralgia or other pain, violent cough, distressing headache, delirium of cerebral apoplexy and from delirium tremens. Even pain, when not acute, is often relieved, and the large doses necessitated are, by many patients, preferred to morphine. Chloralamide, in doses of from 20 to 60 grs., has checked the pains of thoracic aneurism, carcinoma of the stomach and liver, sarcoma of a rib, erysipelas, rheumatic fever, floating kidneys, neuralgia, gallstone, varicose ulcer and alcoholic neuritis. In chorea, a boy of 11 years of age was cured in five days by 15 grs. of the drug given three times daily, and in like manner a girl, after receiving no benefit from other forms of treatment, was afforded relief in eight days. When administered in phthisis it was found that the troublesome night sweats disappeared.—*Canada Lancet.*

A NEW METHOD OF TREATING FRACTURED PATELLA.—At a recent meeting of the Clinical Society of London, MR. MAYO ROBSON showed a patient (a young woman) on whom he had operated by a novel method to secure bony union in a case of fracture of the patella. The skin over and around the joint was cleansed and rendered aseptic and the joint then aspirated. Drawing the skin well over the upper fragment, a long steel pin was passed through the limb from one side to the other, just above the upper border of the patella. The limb being similarly transfixed just below the patella, gentle traction on the pins brought the fragments into apposition. Antiseptic dressing was applied and left undisturbed for three weeks; when it was removed there was no sign of irritation, and the temperature had never been above normal. As the fragments seemed well united the needles were withdrawn, a plaster of Paris splint applied, and the patient allowed to go home. Mr. Robson observed that the only precaution necessary was to draw up the skin over the upper fragment, in order to avoid undue traction upon it when the fragments were approximated. If there was much effusion in the joint it would be desirable to aspirate.—*Medical Record.*

RESORCIN AS AN ANTIEMETIC.—Although impure resorcin as a rule causes nausea and vomiting, the chemically pure article, according to ANDEER, is the surest antiemetic that can be administered in all kinds of vomitings from the most varied causes, even in the persistent vomiting of hepatic, renal and menstrual colic, in the pernicious vomiting of pregnancy, in sea-sickness, in vomiting after overindulgence in food, drink, etc. It may be given in solution or powder in daily quantities of from 0.5–3.0 grm.—*Ther. Monatshefte.*

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LONDON OFFICE, 57 AND 59 LUDGATE HILL.

SATURDAY, JUNE 7, 1890.

MEDICAL EDUCATION AND MEDICAL COLLEGES.

In response to the circulars sent out by the medical colleges of Baltimore, inviting a convention of delegates from all the medical colleges in this country, delegates representing fifty-five such colleges assembled in the Senate Chamber of the State House, Nashville, Tenn., and were called to order at 3 P.M., May 21, 1890. PROF. FRIEDENWALD for President and PROF. WINSLOW ANDERSON for Secretary, were made temporary officers. The Secretary having completed the list of delegates present, a committee of five was appointed to report on permanent organization. This committee after a brief consultation recommended a permanent organization to be called "The National Association of Medical Colleges," and nominated the following officers: For President, N. S. DAVIS, Chicago; First Vice-President, AARON FRIEDENWALD, Baltimore; Second Vice-President, H. D. DIDAMA, Syracuse, N. Y.; Third Vice-President, T. MENEES, Nashville, Tenn.; Fourth Vice-President, SAMUEL LOGAN, New Orleans; Fifth Vice-President, W. H. PANCOAST, Philadelphia; Sixth Vice-President, C. A. LINDSLEY, New Haven, Ct.; Seventh Vice-President, W. F. PECK, Davenport, Ia.; Secretary and Treasurer, PERRY H. MILLARD, St. Paul, Minn.

The report of the committee was accepted and the officers nominated were unanimously elected.

Dr. Davis on taking the chair briefly urged upon the convention the desirability of an immediate and general adoption of a more complete and graded curriculum of studies, longer annual courses of college instruction, and a fair standard of general education before entering upon medical studies. He stated that much advancement had been made, many of the best medical colleges in the country already fully occupying the advanced position desired; but the honor of the profession and the interests of the people alike require that all should come up to the same advanced standard.

A committee was appointed to report definite propositions for the consideration and action of the Association, and report to an adjourned meeting at 8 P.M., in the same place.

At the time and place designated the College Association was called to order by the President. The Committee on Business reported a series of propositions which were considered *seriatim*, and after some amendments were adopted as follows:

1. That the colleges represented in this Association adopt three graded courses, of not less than six months each, no two courses to be given in the same year.

2. That both oral and written examinations be required of all students.

3. That laboratory instruction in chemistry, histology, and pathology be required.

4. That the colleges belonging to this Association demand the following examination of all applicants for matriculation, viz.: A composition in English of not less than 200 words; the translation of easy Latin prose, provided, that students be allowed one year to make up any deficiency in regard to this item; an examination in higher arithmetic and in elementary physics. It is provided, however, that candidates who are graduates or matriculates of recognized colleges of literature, science and art, or of normal schools supported by the different States, be exempt from the provisions of this examination. It is furthermore provided, that it shall be the duty of the secretaries of the various colleges composing the Association to transmit, on request, to the Secretary of this Association a list of all the matriculates, together with a copy of all questions propounded at the matriculation examination. It is also provided that all the matriculation examinations be in writing and, when requested, the original papers shall be forwarded to the Secretary of this Association.

5. That the adoption and enforcement of the above requirements by a college be necessary to the admission of said college to this Association or to its continual membership in the same.

6. That the above requirements be enforced with the matriculates of the session of 1892–93.

7. That each college in this Association be assessed annually the sum of $5 to defray necessary expenses.

The three first propositions were adopted without discussion and with apparent unanimity. The fourth, however, relating to a standard of pre-

liminary education for matriculation in a medical college, elicited a free interchange of views, during which it became apparent that several delegates representing Southern and Southwestern colleges thought their respective institutions not quite prepared to enforce such a rule. No one claimed that a good general education was not exceedingly desirable as a preparation for commencing the study of medicine, but it was feared that its positive requirement would so far diminish the aggregate number of medical students as to leave some of the colleges without adequate support; or the greater fear that some colleges would not enforce the requirement and thereby fill their halls at the expense of those that did so, in good faith.

All admitted that the proposed advance was desirable and must be made some time in the near future. This led to the suggestion that such colleges as desired a little time for further preparation be allowed two years before carrying all the requirements specified into practical effect, which was adopted as shown in the sixth proposition above. With this concession the requirements specified for matriculation, and all the other propositions, were adopted without further opposition, and in a spirit of harmony that portends the most gratifying results. It was evident from casual expressions that a large proportion of the delegates present were authorized to pledge their respective colleges to comply with the several propositions as adopted by the Association, but as others disclaimed having such authority, the Secretary was instructed to send a copy of the proceedings of this meeting to all the medical colleges in the country, asking them to indicate their sanction of the several propositions adopted, and their coöperation as members of this College Association.

When it is remembered that not less than fifty of our medical colleges, including many of the oldest and most influential in the country, are already practically fulfilling all the requirements proposed, and that the laws in several States are such that a diploma from colleges not complying with these requirements, will not procure for its possessor even an examination for a license to practice, it must become evident to all that in less than five years, the medical college that continues to grant diplomas after attendance on two repetitional courses of lectures and no preliminary requirements will find its halls deserted, notwithstanding the cheapness of the honors it confers. The present movement for a more general advance is made in a spirit of harmony and moderation, and it is hoped that it will be favored by every medical college possessing the elements of vitality and the necessary facilities for medical teaching.

THE ANNUAL MEETING AT NASHVILLE.

We only had time, in the last issue of THE JOURNAL, to refer to the opening session of the Forty-first Annual Meeting, and to make a brief reference to the President's Annual Address.

The interest in the following morning sessions was maintained to the last. The special addresses delivered by Drs. DAVIS, CARROLL and LOGAN were timely, able and well received. They are models of their kind, and will well repay the careful perusal which we are sure they will command. They will be found in full in the issues of May 24 and 31.

The usual routine of business was promptly dispatched, and it was evident on all hands that the general welfare of the Association was the chief concern of those who participated in the proceedings. Several important resolutions were introduced, to which at later dates we shall have occasion to refer.

In the Sectional work, which controlled the time and labor of the members during each of the afternoons, large numbers of papers were presented, representing much valuable material which will constitute a most desirable contribution to the Original Department of THE JOURNAL during the current year. The wisdom of creating special Sections for special work was never more noticeable than at this meeting, and the Chairmen and Secretaries are entitled to very great credit for the perfect arrangements of their programmes and for the precision with which their work in the Sections was conducted.

It is obvious that the essential value of the Association to the membership in the future will largely depend upon the wisdom and efficiency with which the Section programmes are prepared. We can hardly commend this fact too strongly to the attention of the officers of the various Sections for the ensuing year.

The election of DR. WM. T. BRIGGS, of Nashville, was a well deserved tribute to himself, to

his city, and to the profession which he so worthily represents.

Perhaps never in the history of the Association have there been such delicate and appropriate expressions of hospitality as were accorded to the physicians and their ladies by the ladies of Nashville; and while they were in every instance most royally bestowed, it is a most commendable fact that the entertainments were so arranged as not to interfere with the working hours of the Association. This was a feature which we not only endorse in the strongest terms, but we suggest that it be permitted to govern in all future arrangements for our medical meetings. We are confident that our medical men and their ladies will long hold in pleasant remembrance the Annual Meeting at Nashville.

MEDICAL MEN IN THE CORONER'S OFFICE.

The intelligent physicians and jurists of Denver have been led to the formation of a medico-legal society, as a partial corrective of the coronerial status in Colorado. As in many another State, the office of Coroner is more political than scientific; no medical qualifications are essential; no post-mortems need be held unless the Coroner shall so ordain, and the rules of the County Commissioners aim rather at a cheap administration of the office than at a satisfactory rendition of the causes of sudden death, whether they be or not of a suspicious or obscure character. Nearly every young community must struggle along for years in a contention with flimsy and inadequate laws, with a miserly policy of reimbursing those who do the scientific work in inquest cases, and with the non-recognition of medicine in civic organizations. The idea that physicians have any official importance in the commonwealth is always a backward product. In Denver the conditions are probably no worse than in many an older community, but its people are more alert in regard to the causes of sudden death, in part, because they have more of them. The Medico-Legal Society of that place was recently addressed by DR. J. T. ESKRIDGE for the purpose of suggesting a remedy for inadequacy in the public records pertaining to violent deaths. His remedy consists in the appointment of a consulting physician to coöperate with the Coroner, and to draw a fair salary as a county official; he it is, and not the Coroner, who shall decide upon the question of holding autopsies and the extent to which the investigation should be carried in difficult and mysterious cases. This suggestion was adopted by the society and a committee was appointed to see what practical steps can be taken to secure the creation of the office of medical consultant to the Coroner. This was little other and better than a compromise result, since there was a strong expression of opinion on the part of the members that the true solution of the difficulty resided in the selection of a physician, and not a layman, for the Coronership itself. If the law could be so framed as to make trained medical men alone eligible to the office of Coroner there would be no necessity for having two officials, as implied in the proposition of Dr. Eskridge. But ordinarily there are political reasons why a layman would commonly have the preference over the physician, no matter how well qualified and trained, and a law is necessary to show the people that their best protection against certain dangers to life and to the miscarriage of justice is to be found in putting a higher value than is generally done on the physician's responsibilities and almost constant usefulness in public affairs, where life and death are among the factors to be considered. It is proper to say here and to repeat in public, whenever our words can give a healthful impetus to the reflections of good citizens, that the experience of the world has been that a good and thorough lay Coroner is the exception and not the rule, while an inefficient medical man in that office has hardly ever been known. Of course, in the older countries of Europe, there have been ample chances to judge between the two classes of officials just referred to, and there is abundant testimony to prove the clear title which vests in the medical man for fitness for, and an almost invariably satisfactory performance of, the office of the "Crowner's quest."

EDITORIAL NOTES.

THE ACADEMY OF MEDICINE.—The old New York Academy building has been sold to a library association for $60,000, or $20,000 less than was expected to be realized. The new Academy is rapidly approaching completion, but it will require three or four months to bring about the removal and the re-organization.

NEW HAMPSHIRE MEDICAL SOCIETY. — The ninety-ninth annual meeting will be held in Concord, Monday and Tuesday, June 16 and 17, 1890, at the hall of the G. A. R., 15 Warren street, commencing at 11 o'clock A. M. There will be a meeting of the Council on Monday evening, June 16, 1890, at the hall of the G. A. R., at 7 P. M. As this meeting is designed to consider all questions relating to ethics or new business, and to attend to all applications for membership, it is hoped there will be a full attendance of the Councillors. All members having business or papers to present to the Society must bring them in person, or forward them to the Secretary in season for this meeting. All applications for membership must be made to the Secretary prior to this meeting, giving full name and place of business, when and where graduated, and, unless personally known to one or more members of the Council, the applicant should forward a recommendation from some member of the Society. Members of District Societies will be admitted on a certificate of membership from the President or Secretary of the District Association. This meeting will be called to order promptly, in order that members of the Council may complete their work in season to attend the reception given by the management of the New Hampshire Asylum for the Insane and the Board of Commissioners of Lunacy.

THE PASTEUR INSTITUTE AT NEW YORK.—Dr. Gibier of this institution reports that the number of persons admitted for treatment, in March and April, was 20, of whom thirteen were received in March.

CURIOUS CASE OF CATALEPSY.—The Paris correspondent of *The Lancet* relates the following curious case as having occurred at Dunkirk on April 14, and as "showing the utility of catalepsy." A young girl of 17 years was seized with a violent attack of epilepsy, and fell on the above date into a canal. A boatman immediately jumped into the water to save her, and brought her to shore after twenty minutes. The most singular circumstance connected with the accident is that when the young girl was taken out of the water she presented all the symptoms of catalepsy; and notwithstanding this long immersion, she was resuscitated, and nothing afterwards transpired to cause any anxiety.

THE AUSTRALIAN RABBIT PEST.—*The Lancet* says: The final report has been issued of the Royal Commissioners in New South Wales on the result of the schemes received in response to their proclamation of August, 1887, offering a reward of £25,000 for any method for the effectual extermination of rabbits. The schemes were very numerous, and suggested various methods. The commissioners advise that when necessary the State should advance to lessees of Crown lands and occupiers of land the cost of netting fencing on certain conditions; but they have found no evidence to warrant the belief that any known method can exterminate rabbits.

MEDICAL SOCIETY OF WEST VIRGINIA.—The twenty-third annual meeting will be held at Wheeling, W. Va., June 11, 12 and 13, 1890. The Committee of Arrangements is making special preparations for the entertainment of members and guests.

THE INTERNATIONAL MEDICAL CONGRESS AT BERLIN.—In the Section of Pharmacology, a discussion on Anæsthetics will be opened by Dr. Lauder Brunton, and one on the Pharmacopœia question by Dr. Langgaard. Addresses will also be delivered by Professors Binz, Böhm, Brackett, and Liebreich. A *souvenir* of the meetings will be presented to the members of the section in the form of a "conspectus" of all the German essays on experimental pharmacology which have appeared during the last twenty-five years.

CREMATION.—The sixth meeting of delegates from the various cremation societies will meet at Berlin from August 4th to 6th. The following is the programme as at present arranged: Report on the position of legislation with regard to cremation in different countries; the conditions of transport of dead bodies on railways in Germany and elsewhere; discussion on the best kind of cremation chamber, and the results by experience in different countries.

THE LATE PROF. DAMASCHINO.—The friends and pupils of the late Prof. Damaschino have opened a subscription to meet the cost of placing his bust in the Examination Hall of the Faculty of Medicine, Paris.

LEPERS IN INDIA.—At a recent meeting in London it was stated that the official statistics estimated the total number of lepers at 135,000.

TOPICS OF THE WEEK.

TRIBUTE TO THE MEMORY OF THE LATE DR. BYFORD.

The Obstetrical Section of the American Medical Association, in session at Nashville, Tenn., May 22, 1890, on hearing of the death of Dr. W. H. Byford, of Chicago, resolved to inscribe upon the records of the Section the following tribute to his memory:

In the midst of our deliberations while here assembled in the interest of our noble profession, the death-knell has sounded, and as we listen there comes to us the sad message that a noble life is suddenly ended. The shaft that represents a grandly developed character had risen in its symmetry and in its beauty to unwonted proportions until it had reached its full development. The finial stone is laid, and it stands complete.

William Heath Byford, one of the Vice-Presidents of this Association, a Chairman of our Section, for more than a third of a century a most distinguished teacher of gynecology, whose writings are text-books, and whose name and fame are National, is dead.

Pausing in the midst of our deliberations and bowing reverently and submissively to the mandate that has summoned him away, we desire to inscribe upon the pages of our proceedings the record of our grief.

We would lay upon that silent casket a wreath of *immortelles* expressive of his worth; we would strew upon that open grave the choicest flowers as a tribute of our affection; we would mingle our tears with those who weep in the expression of a common sorrow.

Formal resolutions are idle in the expression of our grief. We inscribe upon our records the heartfelt tribute which we would pay to that pure and noble life which will ever be cherished in grateful remembrance, and we direct that a copy of this expression be forwarded by the officers of our Section to the family which mourns such an irreparable loss.

FRANKLIN H. MARTIN,
THAD. A. REAMY,
J. G. MEACHEM.

THE NEW PHONOGRAPH OF EDISON AS A UNIVERSAL ACOUMETER.

Dr. L. Lichtwitz, of Bordeaux, proposes the employment of Edison's new phonograph as the universal acoumeter (*Annales des Maladies de l'Oreille*, October, 1889). At present the three tests of hearing are the watch, the tuning-fork, and the human voice. The first-named is very poor, the last-named is the best. The characteristics of a good acoumeter are then given as follows:

1. The acoumeter should be able to emit all the sounds perceptive by the normal human ear, especially speech in all its inflections.

2. It should be a constant source of sound in order to facilitate a comparison of hearing in different patients, and in the same patient at different epochs of his disease.

3. It should be an apparatus of uniform construction, in order to render its employment universal among aurists of all countries and make the registration of audition easily comprehensible, as the ophthalmologists can do in regard to vision.

4. Its employment should be easy, without requiring too much time or space for its use.

5. It should render possible the measurement of the sharpness of the hearing both by aërial and cranio-tympanic conduction.

The new phonograph of Edison possesses, if not all of these qualities, at least the first two, which are indispensable in a good acoumeter, and it is said to be possible, by some modifications, to give this instrument all the desired qualities of a perfect acoumeter.—*Amer. Jour. Med. Sciences.*

IS LEPROSY CONTAGIOUS?

Under this heading (*Monatshefte für praktische Dermatologie*, October 1, 1889) Prof. Smirnoff, of Helsingfors, refers to the diametrically opposite views put forth by two authorities, Hansen, of Bergen, and Zambaco, of Constantinople. The former expressed himself, at the International Medical Congress in Copenhagen, in 1884, in favor of the contagiousness of the disease, while the latter stated that he had never observed a single instance in proof of contagion. Smirnoff cites the case of a married woman affected with anæsthetic ulcerative leprosy, who had lived with her husband for fifteen years without having communicated the disease to him. Two children were born during a period when the disease seemed to be progressing, both of whom were still healthy at the age of one and two years respectively. The author thinks that this case speaks in favor of Zambaco's and against Hansen's views, and that leprosy is neither contagious nor inheritable.—*Am. Jour. Med. Sciences.*

RELATION OF PHYSICIANS AND DRUGGISTS.

The relation of physicians and druggists, though not so strained as in the days of Sir Samuel Garth, the great London physician who wrote the well-known poem, "The Dispensary," which covered the apothecaries with ridicule, is to-day a question worthy of serious consideration. Then, as now, the druggists to whom the physicians send their patients and prescriptions, are constantly prescribing for these patients, and in many ways injuring the business which belongs to the educated physician, and at the same time maltreating the confiding customers. While I would not advise the organization of physicians to oppose and condemn the druggists, as was done in the latter part of the seventeenth century, yet I do advise every young physician to acquire the habit of dispensing, as far as possible, his own medicines. This is made very easy in these times by the elegant preparations which are sent to us, already compounded by the manufacturing pharmacists; and is also facilitated by the greatly reduced quantity of medicine which is now given. In urging this method upon the young physicians of to-day, I am also speaking in the interests of our patients, whose welfare, both physical and financial, should always be uppermost in our minds. Even the medicine which would cost the physician but a few cents, and could be administered immediately, were the doctor his own dispenser, will cost the poor patient, who takes the prescription to a drug store, a dollar or more, and cause delay, sometimes for hours, in the administration of the

needed drug. Those of us who have, in years of practice, acquired the almost unconquerable habit of writing prescriptions, should see to it that our patients are sent to druggists who are both honorable and educated, and who will not try to substitute their own advice for that of the physician.—*Occidental Med. Times.*

THE WORLD'S FAIR.

In May, 1893, the World's Fair will open in Chicago. Knowing the enterprise, energy and ambition of the citizens of that metropolis, we may reasonably expect it will prove to be the most notable exposition the world has ever seen. This Society should do something to give the visitors at that great Fair a comprehensive idea of the climate of California. Two plans have suggested themselves: 1. To have a large papier-maché model of the State, giving the observer at a glance an idea of our physical geography; showing forests, water-courses, altitudes, and game—showing our health resorts at altitudes of from below sea level, at Indio and Salton, to 10,000 feet above. 2. To offer a prize of $500 for the best article, equivalent to not over 50 pages 12mo, printed matter, descriptive of the climate of California. There would be no trouble in raising money to have such an essay published by the 10,000 copies. It should be as reliable as Euclid, and as entertaining as Don Quixote.—*Occidental Med. Times.*

INTESTINAL DISEASES OF INFANTS.

In an interesting article published in the *Archives of Pædiatrics*, May, 1890, Dr. W. S. Christopher, ably advocates the theory that all the so-called summer complaints are due to ptomaine poisoning. The following is a summary of his conclusions:

1. Various forms of abnormal fermentation occur in the bowels, and when they occur in infants, and produce symptoms, they constitute the immediate cause of the collection of diseases known as summer complaint.

2. Summer complaint so defined includes putrefactive constipation and all forms of diarrhœa and dysentery not diphtheritic in origin nor symptomatic of septicæmia.

3. The three great predisposing causes of summer complaint, viz., hot weather, overcrowding, and bottle-feeding, are to be regarded as acting solely as adjuvants to fermentation.

4. The diet during summer complaint should be determined entirely by the conditions within the bowels, and not by theoretical ideas as to Nature's food.

5. At least two well-marked forms of abnormal intestinal fermentation may be recognized clinically, viz., the putrid and the acid.

6. In the putrid fermentation, carbohydrates should constitute the food, and in the acid form albumen should be the only food.

7. Milk, containing, as it does, both proteids and carbohydrates, should be prohibited in all forms of intestinal fermentation. If properly sterilized, other food can be given; nursing babies with severe summer complaint should be taken from the breast.

8. All food administered, of whatever type, should be aseptic.

9. In addition to regulating the diet on the foregoing principles, the treatment should include laxatives and intestinal antiseptics.

10. The lesions are to be regarded as the results of the fermentation, and are more marked in proportion to the duration of the disease.

11. The lesions assist in prolonging the disease, and in all probability act by providing a habitat for the micro-organisms, and by their secretions furnishing the germs with material with which to maintain their biological activity.

12. In chronic cases, where well-marked lesions may be supposed to exist, lavage of the large intestine and of the stomach, with appropriate antiseptics, is indicated.

13. Opium is contraindicated except in persistent acid fermentation which threatens to produce anatomical lesions.—*Medical News.*

OCULAR COMPLICATIONS IN INFLUENZA.

In the February number of the *Recueil d'Ophthalmologie* Dr. Galezowski describes two forms of ocular affection which have been seen by him. In the one the conjunctiva is alone attacked, and the symptoms usually come on at the commencement of the disease. There is pain around one eye, and the lids feel heavy and tend to droop involuntarily, as if the patient were sleepy. Lachrymation and photophobia are frequently present, and the vision fails after a few seconds on attempting to read. In the morning the lids adhere, but there is not much secretion. The vessels of the sclerotic are distended, but the pupil acts perfectly. The author attributes these symptoms to neurosis of the fifth nerve. The other class of case presents a more serious complication, for in it the cornea becomes superficially ulcerated over a large area of triangular shape, the base being towards the circumference, and the apex reaching to the centre of the cornea. The ulcerated area becomes completely anæsthetic, while there is hyperæsthesia of the adjacent corneal tissue. The ulcer tends to increase in size but not in depth. The complication appears late, often during convalescence; the prognosis appears to be favorable. This complication would also seem to be due to some abnormal condition of innervation.

BICYCLING FOR YOUNG PEOPLE.

Dr. B. W. Richardson discusses this subject in a recent issue of the *Æsclepiad*. He admits that since he first warned the public of the dangers of immoderate cycling changes have taken place in the construction both of bicycles and tricycles which materially modify the old drawbacks. He is still, however, of the opinion that cycling should never be practiced by boys and girls, since it differs from other exercises in the fact that it molds the bodily framework, as it were, to its own mode of motion; and riders in course of time almost invariably acquire what he calls "the cyclist's figure," which is not graceful and indicative of the possession of perfectly balanced powers. Of two things, at least, he is satisfied. They are that the temptation of competition is to an earnest and practiced cyclist a "demon of danger," and that the systematic pursuit of cycling should never be fully commenced before the age of twenty-one.—*Weekly Med. Review.*

HYPNOTISM AND SUGGESTION.

Prof. Bernheim, of Nancy, gave an interesting demonstration at the Hôtel Dieu, in Paris, a few days ago, of the possibility of suggestion without previous hypnotism. The experiments were performed in the presence of many leading members of the medical and legal professions and several distinguished literary men. Prof. Bernheim was able to elicit from patients, to all appearance in the full possession of their senses, confessions of imaginary crimes, which were confirmed by the suggested testimony of other subjects. He is said to have made them weep or laugh as he bade them, and to have struck them dumb or motionless at will, playing on their nervous system as on an instrument. It is comforting to be assured by Prof. Bernheim that the number of persons whose "stops," as Hamlet says, can thus be governed is exceedingly limited. Possibly when the proceedings are reported in the dry language of science the thaumaturgic element will be less obtrusive than it is in the accounts which have appeared in the lay press.—*The Lancet.*

AMERICAN MEDICAL ASSOCIATION.

Forty-first Annual Meeting, held at Nashville, Tenn., May 20-24, 1890.

GENERAL SESSION.—THIRD DAY.

The President called the Association to order at 10 A.M.

Prayer was offered by Rev. Mr. Cave.

Dr. Briggs presented several communications relative to the business of the day.

Dr. Eugene Grissom, N. C., read the report of the Committee on Nominations, as follows:

For President—Wm. T. Briggs, of Tennessee.

First Vice-President—C. A. Lindsley, of Connecticut.

Second Vice-President—R. C. Moore, of Nebraska.

Third Vice-President—H. C. Wyman, of Michigan.

Fourth Vice-President—L. P. Gibson, of Arkansas.

Treasurer—Richard J. Dunglison, of Pennsylvania.

Permanent Secretary—William B. Atkinson, of Pennsylvania.

Librarian—C. L. Richardson, of District of Columbia.

Trustees of Journal—J. B. Hamilton, District of Columbia; J. V. Shoemaker, Pennsylvania; D. E. Nelson, Tennessee.

Judicial Council—X. Z. Scott, O.; W. F. Peck, Ia.; J. A. Lane, Kans.; J. H. Murphy, Minn.; T. J. Happel, Tenn.; D. J. Roberts, Tenn.; A. Garcelon, Me.

Committee on State Medicine—Ala., Jerome Cochrane; Ark., T. E. Murrell; Cal., W. F. McNutt; Col., P. V. Carlin; Conn., G. H. Pierce; Dak., F. J. Kenyon; Del., L. P. Bush; D. C., J. B. Hamilton; Fla., F. H. Caldwell; Ga., —— Bullard; Ill., H. A. Johnson; Ind., F. W. Beard; Ia., G. F. Jenkins; Kans., W. L. Schenck; Ky., J. N. McCormack; La., J. H. Bemis; Me., T. A. Foster; Md., G. H. Rohé; Mass., S. W. Abbott; Minn., P. H. Millard; Mich., H. B. Baker; Miss., Wirt Johnson; Mo., E. W. Schauffler; N. C., J. H. Tucker; N. J., D. Benjamin; N. Y., E. M. Moore; New Mexico, F. H. Atkins; Neb., J. R. Hazzard; Ohio, N. R. Coleman; Oregon, W. D. Baker; Pa., W. T. Bishop; R. I., H. R. Storer; S. C., Grange Simons; Tenn., J. H. Callender; Texas, T. R. Briggs; Utah, F. S. Bascom; Vt., E. R. Tampbell; Va., H. F. Nelson; W. Va., S. L. Jepson; Wis., B. O. Reynolds; Wash., J. T. Willsey; U. S. A., F. C. Ainsworth; U. S. N., T. Wolverton; U. S. Mar.-Hosp., W. Wyman.

On Necrology.—Ala., J. T. Searcy; Ark., R. G. Jennings; Cal., Winslow Anderson; Colo., W. H. Hawkins; Conn., W. A. M. Wainwright; Dak., F. M. Crain; Del., L. P. Bush; Fla., F. Stuyer; Ga., R. H. Cortelyou; Ill., E. P. Cook; Ind., J. F. Hibberd; Ia., D. W. Crouse; Kans., Levi Horner; Ky., Wm. Bailey; La., J. R. Mattis; Me., A. J. Fuller; Md., D. Street; Mass., H. A. Morley; Minn., W. W. Mayo; Mich., W. B. Alvord; Miss., B. F. Kittrick; Mo., J. M. Jordan; N. C., C. J. O'Hagner; N. J., H. P. Hough; N. Y., N. Jacobson; New Mex., L. Kennon; Neb., D. C. Bryant; Ohio, S. P. Deahofe; Oregon, —— Shackelford; Pa., T. W. Shaw; R. I., —— Chapin; S. C., A. A. Moore; Tenn., C. F. Sim; Texas, W. P. Burts; Vt., M. R. Crain; Va., L. B. Edwards; W. Va., —— Barber; Wash., N. G. Essig; Wis., J. G. Meacham; U. S. A., C. R. Greenleaf; U. S. N., I. W. Ross; U. S. Mar.-Hosp., F. Irwin.

E. L. Shurley, of Michigan, *Address on General Medicine.*

Joseph M. Mathews, of Kentucky, *Address on General Surgery.*

W. L. Schenck, of Kansas, *Address on State Medicine.*

Place of meeting in 1891, San Francisco, Cal. *Time*, first Tuesday in May.

Dr. H. O. Walker, Michigan, moved to amend the report by striking out San Francisco, and inserting Washington, D. C.

Dr. C. Gapen, Nebraska, moved to amend by inserting Omaha.

After some discussion, Dr. E. Grissom called the previous question, which was seconded by twenty members.

The vote being taken on Omaha, it was negatived by 53 to 150.

The vote was then taken on Washington, it was agreed to by a vote of 275 to 10.

The report was then adopted as amended.

Dr. Reyburn then nominated Dr. D. W. C. Patterson as the Chairman of the Committee of Arrangements, and Dr. C. H. A. Kleinschmidt as Assistant Secretary.

Dr. Samuel Logan, of Louisiana, then read the *Address in Surgery.* (See page 773.)

On motion of Dr. Brodie, the thanks of the

Association were tendered to Dr. Logan for his able Address, and a copy was requested for publication.

Dr. E. A. Wood, of Pa., then read the Report on Dietetics. This was followed by the report of the Secretary of the Committee, Dr. Woodbury, Pa. He offered in conclusion, a resolution that the word physiology be stricken from the Section 1, and a new Section, entitled the Section on Dietetics and Physiology be formed.

The report was adopted and the amendment laid over till next session as required by the By-laws.

Dr. P. H. Millard, of Minn., presented a Report of the work done by the National College Organization. He offered the resolutions as adopted almost unanimously by the College Association.

1. That the colleges represented in this Association adopt three graded courses of not less than six months each, no two courses to be given in the same year.
2. That both oral and written examinations be required of all students.
3. That laboratory instruction in chemistry, histology and pathology be required.
4. That the colleges belonging to this Association demand the following examination of all applicants for matriculation: 1. A composition in English of not less than 200 words. 2. The translation of easy Latin prose, or, in lieu thereof, an examination in either German, French or Scandinavian languages, provided that students be allowed one year to make up any deficiency in this part of the examination. 3. An examination in higher arithmetic. It is provided, however, that candidates who are graduates or matriculates of recognized colleges of literature, science and art, or of normal schools supported by the different States, are to be exempt from the provisions of this examination.

On motion of Dr. J. V. Shoemaker, of Penna., the Association accorded a hearty approval of the report and resolutions.

Dr. S. P. Moyer, of Ill., offered the following:

Resolved, That at future meetings of this Association the business of the general sessions shall be conducted from the floor of the house, and no one occupying a seat on the platform shall be recognized by the President, excepting the Secretary; providing, however, that nothing in this resolution shall be construed as preventing the Chairman from inviting members to address the Association from the platform.

A motion to lay the resolution on the table was negatived.

Dr. N. S. Davis offered to amend by adding the Chairman of the Committee of Arrangements, which was adopted by the mover of the original resolution.

After some further discussion it was adopted.

Dr. Comegys, of Ohio, was allowed the floor to explain his action of yesterday. The President acknowledged that he had misunderstood his remarks, and asked him to restate his motion. After explanations by Dr. Shoemaker and others, Dr. Davis demanded the order of the day.

The President announced as the Committee on his Address, as ordered by special resolution, Drs. W. L. Schenck, Kans.; Benj. Lee, Penna.; T. B. Evans, Md.; E. Grissom, N. C., and H. B. Baker, Mich.

On motion of Dr. Davis the Association adjourned till 10 A. M. on Friday.

FOURTH DAY.

The President called the Association to order at 10 A. M.

Prayer was offered by Rev. Dr. Lofton.

The Permanent Secretary read a number of announcements relative to the railroads, etc.

Dr. Carroll being absent, on motion of Dr. Brodie the *Address on State Medicine* was read by title. (See page 754.)

The list of delegates abroad was read by the Permanent Secretary, and will be published in an early issue of THE JOURNAL.

On motion of Dr. Brodie the President and Permanent Secretary were authorized to appoint additional delegates to the Tenth International Medical Congress and the British Medical Association and the Canadian Medical Association.

Dr. Shoemaker inquired if all those named were members in full standing of this body. Time did not allow of the present examination of the roll of members, and therefore he moved that credentials be issued only to such as appeared on the list of membership. Carried.

On motion of Dr. Brodie it was resolved,

That at the next meeting of the Association, to be held in Washington the first Tuesday in May, 1891, the Chairman of the Committee of Arrangements is hereby instructed to have tickets of admission to the first two meetings prepared, which shall be given the members upon the payment of his annual dues, the same to be shown at the door to a person appointed for that purpose.

Dr. Woodbury suggested that tickets of a different color be issued to the delegates who alone have a right to vote, and that a part of the hall be set aside for them. After some discussion this proposition was rejected.

Dr. Brodie offered a resolution prohibiting the placing of books and other advertising sheets on the seats, when Dr. J. H. Hollister offered the following, which was accepted by Dr. Brodie:

WHEREAS, Certain parties without authority are presuming to make use of this Association for the furtherance of advertising interests, therefore

Resolved, That at all future meetings of the Association such publications be excluded from the place of meeting either of the General Sessions or of its Sections.

Resolved, That in the future each Chairman of the Committee of Arrangements be directed to procure a copyright of the Official Programme, to the end that the financial rights of the Association may be protected by due process of law.

This was unanimously adopted.

Dr. J. C. Culbertson, of Ohio, offered the following amendment to the by-laws:

That the State and Geographical District Societies in affiliation at this time with this Association, having a membership of one hundred or more, shall be recognized as branches of the American Medical Association.

That all members of said societies enjoy all the rights and privileges now accorded the delegates.

Resolved, That the said organizations be overtured, through our Permanent Secretary, to take such action as will enable them to concur in these suggestions.

Dr. Hollister moved that it lie over for action at the next meeting. Adopted.

Dr. W. H. Daly, of Penna., offered an amendment, as follows:

That in future the permanent members have all the rights of delegates.

Laid over.

Dr. J. M. Toner, of D. C., offered the following:

WHEREAS, It is fitting that the American Medical Association should take proper notice of the Centennial of the Discovery of Vaccination, by Dr. Jenner, as a protection against small-pox, which will occur in a few years; therefore, to the end that due and timely consideration be given to the subject,

Be it resolved, That the President of this Association be empowered to appoint a committee, to consist of one physician of recognized ability from each State and Territory of the United States, to consider the whole subject and report a practical scheme which shall bring the century of the practice of vaccination in this country under review, and in such study secure the expression and co-operation of the medical profession residing in every part of our country, old and new, and report, with recommendations as to the scope and methods to accomplish this, to the next meeting of this Association, for its consideration and adoption.

The resolution was seconded by Dr. N. S. Davis and unanimously adopted.

Dr. I. N. Love announced the death of Dr. Jackson, First Vice-President, and on his motion the President appointed the following committee to take suitable action: Drs. I. N. Love, J. B. Hamilton and W. Brodie.

The committee reported as follows:

Resolved, That the American Medical Association desires to express its great sorrow in the knowledge of the death of its First Vice-President, Dr. John W. Jackson, of Missouri.

That the sympathy of the Association is extended to his family.

(Signed) I. N. LOVE,
J. B. HAMILTON,
W. BRODIE.

The resolutions were adopted.

The Permanent Secretary read the following:

E. M. MOORE, PRESIDENT AMERICAN MEDICAL ASSOCIATION.

Dear Doctor:—Finding myself so circumstanced as to be unable to give that attention to the publication of THE JOURNAL of the Association which I deem it is proper a Trustee should do, I therefore feel constrained to request that my resignation of the responsible position of Trustee be accepted. Very respectfully,

J. M. TONER.

On motion of Dr. Brodie the resignation was accepted.

Dr. Brodie moved that the vacancy be filled by Dr. E. M. Moore, of N. Y., the retiring President.

Dr. J. F. Hibberd, of Ind., was also named.

After some remarks a vote was taken by the Permanent Secretary, and he announced that Dr. Moore had been elected.

The following action of the Tennessee State Druggists' Association was read:

TO THE AMERICAN MEDICAL ASSOCIATION.

Gentlemen:—The Tennessee State Druggists' Association has delegated us to present to your honorable body a question, the importance of which to your profession, as well as ours, can hardly be overestimated, and we place it before you with the hope that it may receive at your hands the weight it merits.

The resolutions adopted by the Tennessee Druggists' Association are as follows:

Resolved, That a committee of three be appointed to lay before the American Medical Association the great and growing evil of prescribing secret and proprietary preparations by many members of the medical profession; that many of such preparations are glaring frauds, the formulæ often stated on the labels are misleading, if not fictitious, and that all such preparations should be classed as secret proprietary, or patent medicines, and that the American Medical Association be petitioned to declare it against its code of ethics for any member of that body to prescribe any such preparation; that the Association be requested in every possible way to discourage their use, as in prescribing these nostrums the medical practitioner is really playing into the hands of quackery, thus teaching his patient to dose himself, and that the use of such nostrums is utterly unscientific and unbecoming a profession striving after exact methods, is unworthy our age, and against the best interest alike of the professions of medicine and pharmacy, as well as their patients and patrons.

While these resolutions might suffice, we trust a few words in explanation will be allowed. It may be needful to emphasize a few facts possibly overlooked by the busy practitioner.

Have you ever given the published formulæ of these preparations serious thought? Say listerine, a very popular proprietary remedy, the claim of its composition, *benzo boracic acid, mentha avenis*, etc.?

Now, benzo-boracic acid has no existence, and for a solution of boracic acid, flavored, is it right that you should make the druggists charge one dollar per bottle? Has it never occurred to you that a solution of boracic acid would do all that listerine ever did? Or, for instance, have you given the published formula of bromidia due consideration? Can extract canabis indica be held in solution in an aqueous nostrum? Would not a solution of chloral and potassium bromide, in the proportions indicated, always serve the purpose? Also, is not pinus canadensis, colorless, simply a solution of sulphate of zinc? Tasteless syrup of quinine, 2 grains to the teaspoonful? The label boldly lies to you, as it has been shown not to contain any quinine at all. But as the most perfect type of these fraudulent preparations let us present to you "Phosphorized Cerebro-Spinant, Freligh's Tonic, registered, copyright secured," and quoting its label: "Those familiar with the action of drugs know the homogeneous relation they bear to each other, how their *pathogenetic and curative spheres* are enlarged and dynamatized by a judicious combination." Can charlatanism go further, and should any doctor rely upon such statements? Yet many eminent physicians prescribe Freligh's Tonic; medical editors accept its advertisement and recommend it. The result is you are not getting what you purpose to prescribe, and form incorrect conclusions as to the therapeutic value of the remedial agents intended to be employed, are helping to undermine the very foundation of scientific medication, and aiding in building up a class of manufacturers whose methods are unscientific and unprofessional, and are endeavoring to obtain endorsement through fair means or foul. We fully appreciate that many of these preparations have been employed, if not thoughtlessly, as a matter of convenience and in good faith; yet you have at the same time given an impetus to self-dosing and taught

your patient the use of many ready-made cures, many of which—as Fellow's Syrup, Pond's Extract, Horsford's Phosphates, etc.—are duly advertised not only in newspapers, street posters, etc., but also in prominent medical journals.

Yet, gentlemen, many eminent physicians and college professors have done much in extending this unwise and injurious practice of self-medication.

These few salient points are submitted for your earnest consideration. One State association has already taken a step in advance. At the last meeting of the State Medical Society of Arkansas, on motion the Committee of Arrangements was instructed to prohibit the exhibition of secret proprietary articles in connection with the meetings of this society.

Gentlemen, we leave this very important matter in your hands. Yours respectfully,

(Signed) AL. A. YEAGER,
STACEY LORD,
A. A. KLEINSCHMIDT,
Committee.

On motion of Dr. W. H. Daly, of Penna., the communication was received and ordered to be printed in THE JOURNAL, and the thanks of the Association sent to that body for bringing these important questions to our notice.

Dr. F. Woodbury, of Pennsylvania, presented the following:

Your Committee appointed to confer with a Commitee of the American Pharmaceutical Association, respectfully reports that it has performed the duty assigned to it, and recommends that the following resolution be adopted and the Committee discharged:

Resolved, That the words Materia Medica be taken from the title of Section I, and that a new Section be formed, to be entitled the Section on Materia Medica and Pharmacy, to have the same privileges as other Sections of this Association.

All of which is respectfully submitted.

(Signed) FRANK WOODBURY, Chairman,
G. E. FROTHINGHAM,
J. C. CULBERTSON.

On motion the report was adopted and the amendment to the laws adopted unanimously.

Dr. F. Woodbury was named as Chairman and Dr. W. G. Ewing, of Tennessee, as Secretary of the new Section.

The following from the Illinois State Medical Society was read:

Resolutions passed by the Illinois State Medical Society at the annual meeting held in Chicago, May 6, 7 and 8, 1890.

1. That at the World's Columbian Exposition to be held in Chicago in 1893, there should be such an exhibit as will represent the history and present status of the medical and allied sciences.

2. That this Society hereby requests the American Medical Association, as the largest and most representative organization of medical men in this country, to take the initiative and inaugurate such measures as will conduce to secure a creditable exhibit.

On motion, it was resolved that this Association will take action in accordance with these resolutions.

The Committee on Coroners reported as follow:

REPORT OF COMMITTEE ON CORONERS.

Your Committee appointed three years ago upon the revision of the coroner laws of the United States, beg leave to submit the following report:

That they have examined carefully the laws of the various States, and in their first published report, pointed out the great need of a revision of the entire system of laws regulating the interests so vital to the public which are in most of the States relegated to the Coroner. They also pointed out that too often the office was considered a political one, and as such was frequently held by persons utterly incompetent. That the system as generally practiced was one, in the present state of our civilization, neither economic of the public funds, or conducive to the higher ends of justice. They cited the experience in certain States, where for some years (Massachusetts and Connecticut for example), the entire system had been revised, the coroner office, as such, abolished, the legal functions placed under the care of properly educated men, and the medical duties relegated to specially trained experts, called *Medical Examiners*. Your Committee made a report of progress at the last annual meeting, and now would ask to submit the following recommendation for your consideration and approval:

Resolved, That the American Medical Association respectfully call the attention of the various State Boards of Health to the subject of a careful revision of the coroner laws, and be requested to take an active interest to secure such legislation as, in their judgment, may seem best to accomplish this purpose. HENRY O. MARCY,
W. W. DAWSON.

On motion, the report was accepted and the resolution adopted.

A motion to substitute State Medical Societies for Boards of Health was negatived.

A report on the President's Address was offered, but as no signature was attached, on motion of Dr. Brodie the subject was recommitted till next year.

The Permanent Secretary read the Report of the Treasurer:

REPORT OF THE TREASURER.

The Treasurer has the honor to report a balance in the Treasury of $4,703.20, as shown by the itemized statement which will accompany this report, and will be published at length in THE JOURNAL of the Association for the information of members.

All of which is respectfully submitted.

RICHARD J. DUNGLISON, Treasurer.

May 22, 1890.

On motion it was accepted.

Dr. Silas D. Presbrey, of Massachusetts, after an allusion to the work and long continuance in office of the Permanent Secretary, offered a vote of thanks to him.

Dr. Love moved to appropriate $500 as an honorarium.

After a statement by Dr. Toner that all such motions must be referred to the Board of Trustees of THE JOURNAL, Dr. Love withdrew the motion.

Dr. Wm. H. Daly renewed the motion, and to give $100. A motion to refer this to the Trustees was lost and the matter rested there.

The Permanent Secretary read the following as the Officers of the Sections as far as they had been reported:

Practice.—V. Vaughan, Michigan, Chairman; G. Dock, Tennessee, Secretary.

Surgery.—Theo. McGraw, Michigan, Chair-

man; J. B Deaver, Pennsylvania, Vice-Chairman; W. E. B. Davis, Alabama, Secretary.

Obstetrics.—No report.

State Medicine.—J. D. Plunkett, Tennessee, Chairman; C. A. Ruggles, California, Vice-Chairman; F. S. Bascom, Utah, Secretary.

Ophthalmology, etc.—Leartus Connor, Michigan, Chairman; T. E. Merrill, Arkansas, Secretary.

Otology, etc.—No report.

Diseases of Children.—W. Perry Watson, New Jersey, Chairman; H. A. Hare, Pennsylvania, Secretary.

Medical Jurisprudence, etc.—No report.

Dermatology, etc.—L. D. Bulkley, N. Y., Chairman, W. T. Corlett, Ohio, Secretary.

Oral Surgery.—No report.

On motion the Secretary was directed to communicate with these Sections, and obtain the names of their officers.

Votes of thanks having been offered by several members, on motion of Dr. J. V. Shoemaker, of Penn., it was

Resolved, That the American Medical Association wishes to express its high appreciation to the Chairman of the Committee of Arrangements, and to the profession of Nashville, for the efficient arrangements during the meeting of the Association in their city.

Resolved, That the Association tender thanks and warm appreciation especially to Dr. W. T. Briggs and Mrs. Briggs, Dr. and Mrs. Richardson, Mr. and Mrs. Wilson, Mrs. Polk, Prof. and Mrs. Hancock, Mrs. Connelly, Mrs. Watkins and sister, General Jackson and the ladies Committee, and the citizens of Nashville, for their cordial reception and handsome entertainments given to the members of the Association.

Resolved, That we return thanks to the newspapers, the Clubs of Nashville, and the railroad companies of Nashville, who so generously extended their courtesy to our members.

In addition to such sentiments, Dr. Moore, the retiring President, said: "The wives and daughters of the members of the American Medical Association, who have visited Nashville at the present time, desire through me, to express their heartfelt thanks for the unbounded hospitality of which they have been the recipients at the hands of the ladies of this beautiful city. The charming grace with which this has been dispensed will ever remain as one of our most delightful memories."

Dr. N. S. Davis eloquently joined in the tribute to the ladies and the profession of Nashville, and the resolutions were adopted amid great applause.

The retiring President then introduced the President-elect, Dr. Wm. T. Briggs, who in a brief address expressed to the members his high appreciation of the honor they had done him.

On motion of Dr. Brodie the thanks of the Association were given Dr. Moore for his performance of the duty of President.

The President then declared the Association adjourned until the first Tuesday of May, 1891.

WILLIAM B. ATKINSON,
Permanent Secretary.

FOREIGN CORRESPONDENCE.

LETTER FROM LONDON.

(FROM OUR OWN CORRESPONDENT.)

Dr. Bernheim and Hypnotism—Somnal—Ambulance Service—Dr. Gervis on Puerperal Fever—The Leprosy Committee.

The event in the scientific world is Dr. Bernheim's demonstration at the Hotel Dieu, that suggestion does not depend on hypnotism. Dr. Bernheim heads the Nancy school as opposed to the Paris or Charcot school. He experimented in the presence of most of the medical staff, the leading judges d'instruction, advocates, and of M. Dumas *fils*, who came to see to what degree his father's intuitions would be borne out. None of the patients knew anything of Bernheim nor had any idea why he came among them. Each set was taken in a different ward from the other. The Nancy scientist who first discovered this power in a common man, made suggestions to the patients in a state of natural sleep, and then to waking ones. Without trying to hypnotize them he was able to strike them dumb, to paralize their limbs, to make them weep, go into fits of laughter. What chiefly interested the legal part of the audience was the evidence the subjects gave as to imaginary events in which belief was suggested. They were circumstantial, consistent, and not to be shaken. Dr. Bernheim's power has, however, decided limits. It has no action on persons in a thoroughly healthy state.

Sleepless humanity has of late received an inordinate share of attention from inquirers of the therapeuto-pharmacologist class, and the number of hypnotics now before the profession is so great that the old-fashioned maxim "If you can't cure the man, put him to sleep," ought to be a comparatively easy matter, if an ample variety of choice has anything to do with it. Somnal, one of the very latest of these new narcotizers, appears to have already won golden opinions in Continental practice, and in two instances where it has been privately tried in this country, the results are stated to have been eminently satisfacfactory. Somnal is an actual combination (and not a mere mixture) of alcohol, urethrane and chloral. Crystals of this body are obtainable, but they are somewhat unstable, and very deliquescent when exposed to the air, so that a saturated solution in alcohol is the form in which the compound is supplied, the name "somnal" being applied to this solution. The dose is an average of half a drachm. This takes effect in from twenty to forty minutes after administration, and induces a sound, undisturbed sleep, which continues for seven or eight, or sometimes as long as ten hours. The awakening is stated to be quite "natural," and no after ill effects are

caused by this drug. In cases of insomnia from nervous depression or cerebral "shock," and also of acute neuralgia, somnal has been found extremely useful. There are stated to be doubts as to the real state of "combination" of the alcohol in this new preparation, which probably may be more a sort of chloral-urethrane which has itself been separately brought forward as a hypnotic.

Through the instrumentality of the Hospitals Association, an effective ambulance service for the transport of persons injured or suddenly stricken with illness in the London streets has been organized, and its completion in all its details will speedily be accomplished. The metropolis has been mapped out into districts on the basis of the police divisions, and 152 ambulances will be provided, including the fifty-eight already at the police station. For the additional number stations have been secured in suitable localities free of expense. After three month's trial conducted by the police and the hospital authorities a new form of ambulance has been decided upon. It will consist of an iron frame upon three bicycle wheels with India-rubber tyres, and will be furnished with the requisite appliances for rendering "first aid" to the injured. Already forty ambulances have been placed within the four mile radius, twenty being at fire brigade stations, fifteen at hospitals, four at industrial dwellings, and one at Holborn circus, and in a short time eighteen more will be supplied to cab-ranks. The cost of the service estimated at £300 per annum will be defrayed by subscriptions. Considering that four people are killed weekly in the streets of London, and a score or two injured, provision of this order is a work of real humanity.

Dr. Gervis speaking of puerperal fever, said that thirty years ago nothing was known about it. Nothing he considered had added more to the comfort of practitioners than the knowledge of the nature and treatment of these cases. In the great majority of cases septicæmia did not occur without local trouble, and very commonly evidence of this would be found near the outlet if carefully sought for, especially a perineal laceration, which must be treated with antiseptic solution. Pelvic pain was no safe guide to local mischief, considerable parametric swelling might be found on one side when pain was absent. Pelvic inflammatory mischief was the usual precedent to puerperal septicæmia. Curetting the uterus in these cases would need great caution. Dr. Gervis thinks that the uterus should not be washed out unless there were distinct reason to believe that septic matter was inside it, but he had long made a practice of sponging out the genitals with an antiseptic solution and ordering a daily vaginal douche. He thought that by these proceedings puerperal fever might be in time, prevented from occurring. Scarlatina might lead indirectly to septicæmia by leaving surfaces on the tonsils which would give ready entrance to specific germs.

The belief in witchcraft has not quite died out in rural England. At a recent inquest in Suffolk on a female child, æt. 11 weeks, the father and mother stated that they believed death was due to the witchcraft of the child's grandmother. This woman died a few hours before the child, and stated that the child would not live long after her. The child was taken out in a perambulator, and the father stated that he saw smoke arise from the perambulator, and that the child died upon being taken home, the mother stating that it was hot and dry, and smelt of brimstone. The husband of the deceased woman said he was of the opinion that his late wife had the powers of a witch, and he always tried to do what she wanted in consequence. Medical evidence showed that death was due to natural causes.

The leprosy committee, which was some time ago appointed by the Prince of Wales, continues its meetings at Marlborough House, the Presidents of the Royal Colleges of Physicians and Surgeons, and others taking part in the development of a plan for the scientific study of the disease. Of the £12,000 which it is desired to raise upwards of £7,000 has been subscribed. It is proposed to send surgeons trained to scientific investigation to Hawaii, Persia, and India, to collect evidence which will tend to give precision to the knowledge of the cause of the disease and its mode of transmission, and furnish data for preventing its extension.

The "new disease" which was recently discovered in Northern Italy, proves to be cases of ordinary small-pox with well marked prodromal rash.

In a previous letter referring to some statistics with regard to chloroform administration at St. Bartholomews Hospital, the verdict was given in favor of ether and not as inadvertently stated.

G. O. M.

DOMESTIC CORRESPONDENCE.

LETTER FROM NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

The Fallacy of the So-called Hot Air Treatment of Phthisis—The First Annual Reunion of the Alumni of Bellevue Hospital—Dr. Alfred L. Carroll's Course of Lectures on Hygiene and Public Health—The cause célèbre of Kemmler—Reform in the Management of the Insane.

Dr. W. Gilman Thompson, Professor of Physiology in the University Medical School, has read before the Academy of Medicine a paper on "The

Fallacy of the So-called Hot Air Treatment of Phthisis" which ought to have a good effect on the profession and public of this country by exposing the untenableness of the claims put forth for the method in question. That this method is being practiced to a very considerable extent, is evident from the fact that a large establishment is being maintained in this city for the manufacture and sale of the hot air apparatus. This establishment, known as the "Dr. Louis Weigert Company," is scattering broadcast over the country a pamphlet entitled, "Proofs that Consumption can be Cured," which advertises, with various eulogistic letters and newspaper notices, the merits of a cheaper and improved form of the patent "Perfection Hot Air Medicine," the use of which it recommends in consumption, asthma, chronic bronchitis, and various nasal and laryngeal affections.

Dr. Thompson stated at the outset that he had had no practical experience with hot air inhalations in the treatment of phthisis, but he had been much interested in the reports of various observers concerning it; and before giving the results of his own experimental investigations he proceeded to give a *résumé* of what has been written in favor of and against the method during the last two or three years. In the course of this he referred to the exhibition of the Weigert apparatus before the Section on Practice of the Academy of Medicine in February, 1889, by Dr. A. L. Stern, and quoted from the comments of THE JOURNAL on the claims of Weigert and Stern, as presented at that time.

The only observers, he said, who had made a thorough report of the relative number of bacilli present while the patients were under treatment, were Drs. Sears and Trudeau, and they both agreed that there was no material deviation from the average. Trudeau, who, during the progress of his cases, made cultures of the bacilli, and also injected the sputa of his patients into rabbits at regular intervals of five weeks, arrived at the conclusion that the evidence obtained by the bacteriological study of these cases did not confirm the assumption that inhalations of heated air can either prevent the growth of the tubercle bacilli in the lungs of living individuals or diminish the virulence of the microbe when it has gained access to them. The alterations in symptoms reported by the various observers were no argument, he thought, in favor of the hot air treatment. None of these changes were of a very decided type, and any one accustomed to deal with cases of tuberculosis was familiar with the frequent slight changes met with in the course of three or four months, and which were readily explained by variations in diet, hygiene, environment, etc. It was also well known, he said, that the faith which many patients reposed in any new treatment often worked a temporary improvement in their condition. Again, in many instances the patients, in addition to the inhalations, were taking creosote and other remedies. Moreover, the lung gymnastics necessitated by deep inhalation might, in certain cases, have been of benefit by expanding the lungs more fully; thus increasing tissue change in various ways quite independently of any additional heat.

In referring to the immunity from tuberculosis of men exposed to high temperatures at lime-baking ovens, as alleged by Halter, he said that the immunity did not seem to extend to stokers, who inhale equally hot air. The very high speed recently developed by the transatlantic steamers had been attended by considerable loss of life among the stokers. A few months ago one of these men came under Dr. Thompson's care at the New York Hospital, suffering from a very acute pulmonary tuberculosis which had developed while he was at work in the boiler-room of an "ocean greyhound," and the surgeon of the same steamer had stated that in his experience such cases were becoming more and more frequent among the stokers employed in the very hot atmospheres.

The only observers, he said, who thus far had attempted to ascertain, before keeping their patients sucking at a hot air tube several hours daily for months at a time, whether the heated air really does enter the lungs without losing its heat, were Drs. Moss and Rondelli, of Turin. They separated two simple air chambers by a moist membrane, and succeeded in cooling air from 382° to 76° by evaporation in its passage through the membrane from one chamber to the other. They next allowed a dog to inhale air heated to 320° for fifteen minutes, while thermometers inserted in the trachea and bronchi respectively showed practically no difference in temperature. The rectal temperature also remained normal. Dr. Thompson said that the experiments of Moiso and Rondelli were entirely unknown to him until after his own had been completed, and that he was pleased to find that their results were in perfect accordance with those which he had himself obtained. He was desirous of undertaking an experimental investigation because he could not believe, upon theoretical grounds, in the advantages claimed for inhalations of hot and of cold air.

The theoretical objections presenting themselves to him were the following: 1. We are not accustomed to find any important changes in body temperature or in the character of the respiration in those who work in great heat, nor in those who are exposed to arctic cold.

2. The widest variation of body temperature admitted by physiologists to occur in those who exchange an arctic for a tropical climate does not exceed ½ to 1 degree, and even this is not constant.

3. Very hot air in contact with the mucous membrane of the nose, mouth, pharynx and larynx will destroy their epithelium, and produce painful swelling and congestion.

4. If it could reach further it would cause destruction of the ciliated epithelium of the bronchi, and the delicate cells lining the air sacs would be destroyed and desquamated.

5. It would cause dangerous capillary congestion of the lungs.

6. The bacilli are many of them buried in the large tubercular masses. It is not probable that if the hot air could enter the bronchioles or air sacs, it could reach more of the bacilli than such as were by chance contained in the sputa. To reach their real foci sufficiently heated to destroy them the hot air must warm the surrounding blood.

7. Blood serum albumen is coagulated at various temperatures according to the reaction of its evolution and the relative amount of salts present. It may coagulate at as low temperature as 122° or as high as 163°. The myosin in the muscles of the trachea and bronchi is coagulated at 131°–140°. The protoplasm of the various cells and blood corpuscles would all be hopelessly injured by the heat.

8. The blood itself, unless the pulmonary vessels were greatly congested and the heart's action much enfeebled, would tend to carry off the heat of the air very rapidly. An enormous surface of blood is exposed in the lungs which is constantly being replaced by each cardiac pulsation by fresh quantities of blood unheated by the air and ready to absorb more heat units before they can accumulate sufficiently to damage either bacilli or protoplasm.

9. The natural process of vaporization of the water from the mucous surface is amply sufficient to absorb all the heat units that can be brought to the bronchi by the super-heated air.

10. Only about one-tenth of the air in the lungs is exchanged with each respiration.

In the face of all these well known considerations he said it was very difficult to believe that any one could expect for a moment to fill the lungs during life with air hot enough or cold enough to kill bacilli. His experiments were therefore directed to determine: 1. How far can hot and cold air respectively be made to convey heat or cold into the air passages. 2. The influence of evaporation upon heat loss. 3. The influence of conduction and radiation upon heat loss. 4. Any changes, in body temperature, either local or systemic, produced by the inhalations in question. He employed a simple apparatus consisting of an iron pipe eleven feet long, bent with a close coil three inches in diameter, beneath which were placed several powerful Bunson burners. Air was forced through one end of the coil in a continuous current from a large treadle reservoir bellows, and from the opposite end the iron pipe was bent out straight for eight inches, and connected with an inhaler made to fit tightly over the head of the animal to be experimented on. The inhaler had a valve which prevented the inhaled air from entering the coil, and this air passed out through a lateral opening in the inhaler. A thermometer was placed in the inhaler close to the animal's nose, and another one six inches distant in the tube leading from the coil. The animal having been anæsthetized, thermometers were placed in the lungs or trachea, or both, through small openings which they fitted so closely as to make the holes air-tight.

Dr. Thompson then proceeded to give the details of a considerable number of experiments on cats and dogs, with inhalations of both hot and cold air. The latter, he said, had recently been suggested for the control of pulmonary hæmorrhage by Dr. Tullio, of Naples, who claimed to have checked three severe cases after failure with other means, such as drugs, ice to the chest, etc. For the cold inhalations he used the coil imbedded in a mixture of snow and salt; the bellows being operated outside the window in an atmosphere of 27°. In this way the air, after passing through the coil, registered less than 40° at the nose. The conclusions he derived from his experiments were as follows:

1. Continuous inhalation of air heated from 200° to over 300° at the nose does not raise the temperature of the lung at all in some cases, even when maintained for an hour or more.

2. In other cases, if continued for an hour and more, there may be a slight rise of temperature of from 2° to 4°, due to various causes other than the entrance of hot air into the alveoli.

3. The temperature of the trachea under corresponding conditions rises only from 4° to 6°.

4. Cold air does not affect the temperature of the trachea and lungs any more than hot air, and is, therefore, equally useless as an inhalation for any clinical purpose whatever. No one, he said, would think of controlling capillary oozing on the surface of the body by reducing the local temperature only one or two degrees, since it often took a prolonged direct application of ice to produce sufficient vaso-motor stimulus to control hæmorrhage, and even this frequently failed in post-partum hæmorrhage.

He believed the following conditions combined to secure a uniform mean temperature of the air in the lungs and to prevent the entrance of superheated air as such: The great vascularity of the pulmonary tissue; the extensive surface of the air sacs and blood vessels; the slow diffusion of the tidal with the residual air; the uniform temperature of the blood; the remarkable heat regulating mechanism of the entire body, which constantly tends to prevent local increase of temperature through the agency of a very rapid blood

stream; the low specific heat of water and of blood, which is so largely composed of water; the large quantity of blood in constant circulation; the enormous number of heat units rendered latent by vaporization of water; the ease with which water can be drawn from the blood plasm to the surface of mucous membranes, and the slight conduction of heat by the body tissues.

In conclusion he remarked that there are undoubtedly many physiological experiments in regard to which we ought not to reason too closely from the lower animals to man; but it seemed to him that the experiments which he had reported were of a type which must necessarily apply to man as truly as to the lower animals, because they were based upon the laws of physics. They also, he thought, found one more illustration of the great value of vivisections conducted with the object of preventing the employment of methods powerless for the relief of human diseases, the ignorant use of which could only bring great discomfort and loss of time to the patient.

An event of great interest recently was the first annual reunion of the Society of the Alumni of Bellevue Hospital, which was held in connection with the thirty-second monthly meeting of the society during the second week in April. On Tuesday evening, at the Mott Memorial Hall, Dr. Chas. Phelps read a paper on "The Treatment of Simple Fracture of the Patella by Wiring," in which he presented the results of over fifty cases, and among those who took part in the discussion were Drs. Markoe, Bryant, Dennis, Lange, McBurney, Leale, Abbe, Fluhrer, L. A. Stimson and Stephen Smith. On Wednesday morning Dr. Lewis A. Sayre held one of his characteristic and instructive clinics on orthopædic surgery in the amphitheatre of Bellevue Hospital, and in the afternoon, at Mott Memorial Hall, the following papers were read: "Ultimate Results of Injuries to the Hip," by Dr. Reuben A. Vance, of Cleveland; discussion by Drs. F. Hartley, L. W. Hubbard, R. H. Sayre, J. McG. Woodbury and J. A. Wyeth. Discussion on "Transient Glycosuria and Delicate Tests for Sugar in the Urine," introduced by Drs. Brandreth Symonds, of the New York Life Insurance Company, and John Warren, of the Equitable Life Insurance Company, and continued by Drs. H. M. Biggs, A. Flint, G. B. Fowler, R. W. Greene, A. Jacobi, E. G. Janeway and J. W. Roosevelt. In the evening a banquet was held at the Hotel Brunswick, at which toasts were responded to by Bishop Quintard, of Tennessee, Drs. W. H. Draper, Austin Flint, A. L. Loomis, W. M. Polk, and others. The session was brought to a close by an obstetrical and gynecological clinic by Dr. W. T. Lusk on Thursday at Bellevue Hospital.

The course of lectures on Hygiene and Public Health, arranged by the managers of the Mott Memorial Library, is being well received. The lecturer, Dr. Alfred L. Carroll, who is recognized as one of the most accomplished members of the American profession, is especially well qualified to give such a course by his experience, for a number of years, as Secretary of the New York State Board of Health. Dr. Carroll, who for a long time resided at New Brighton, Staten Island, has recently resumed practice in this city.

The *cause célèbre* of Kemmler, the first murderer ever condemned to die by electricity, has now reached its final stage. The execution was postponed for many months by the efforts of the counsel for the prisoner to prove that the act providing for the carrying out of the death penalty by means of electricity was unconstitutional, on the ground that it is a "cruel and unusual" punishment; but the Court of Appeals has at last unanimously decided that the law is constitutional, and Kemmler has been sentenced anew. In concluding the opinion of the Court, Judge Daniel, who rendered it, says: "The decision of the Legislature is conclusive upon the courts. The amendment to the code making the new penalty is not in general purpose or intent a violation of any provision of the Constitution. The testimony taken by the referee, while not impeaching the validity of the Legislature's acts, is a valuable collection of opinions, but nothing more. The Court finds that the mode proposed is not cruel within the meaning of the Constitution, though unusual. On the contrary, all agree with the Court below that it removes every reasonable doubt that the application of electricity to the vital parts of the human body under such conditions and in the manner contemplated by the statute, must result in instantaneous and, consequently, painless death."

The friends of reform in the management of the insane and of humanity in general are jubilant over the passage, by the Legislature, of the new law which transfers all the pauper insane from the county poor-houses, where they are at the mercy of ignorant local officials and subject to all sorts of abuses, to the care of the State in institutions affording facilities for the best modern scientific treatment. This is a triumph after a long struggle, as the State Charities Aid Association, backed by the medical profession, has been striving to get such a bill passed for a number of years, but has always hitherto failed. The act applies to all the counties of the State except New York and one or two others. P. B. P.

MISCELLANY.

LETTERS RECEIVED.

Dr. B. C. Anderson, Beardstown, Ill.; Dr. N. D. Guerry, Trinity, Miss.; Dr. Wm. H. Dukeman, Los Angeles, Cal.; Dr. John B. Crowly, Sullivan, Ind.; Dr. Maris Gib-

son, Wilkesbarre, Pa.; Robt. P. Porter, Supt. of Census, Washington, D. C.; Dr. H. T. Rennolds, Baltimore, Md.; Dr. Wolfred Nelson, New York; Dr. B. M. J. Conlin, Alexandria, S. D.; Dr. M. T. Zellers, Hooper, Neb.; Dr. John B. Hamilton, Washington, D. C.; The Therapeutic Analyst, Norwich, Conn.; Dr. J. C. Culbertson, Cincinnati, O.; P. J. McCauley, St. Louis, Mo.; Dr. H. Reynolds, Livermore Falls, Me.; Medical Herald Co., St. Joseph, Mo.; I. Haldenstein, W. P. Cleary, New York; Dr. S. C. Ayres, Cincinnati, O.; Dr. Clarke Gapen, Omaha, Neb.; Dr. D. G. Trembley, Mace, Ind.; Horace A. Brooks, Salem, Mass; H. Soule, Ann Arbor, Mich.; Thos. Leeming & Co., New York; Dr. J. H. Musser, Philadelphia, Pa.; A. J. Hoon, Mercer, Pa.; Dr. I. P. Klingensmith, Blairsville, Pa.; Dr. E. A. Cobleigh, Chattanooga, Tenn.; Dr. H. H. Mudd, St. Louis, Mo.; Dr. G. E. Humphrey, Galveston, Tex.; Dr. Wm. Pepper, Philadelphia, Pa.; Dr. J. M. French, Cincinnati, O.; Dr. J. C. Dunlavy, Sioux City, Ia.; Dr. J. M. Bleyer, New York; Dr. Alfred Stillé, Lea Brothers & Co. Philadelphia; The Chas. H. Phillips Chemical Co., New York; Occidental Med. Times, Sacramento, Cal.; Dr. J. Trush, Cincinnati; Dr. Wm. Woodward, Washington; Univ. of Penn. Press, Philadelphia; Dr. C. B Porter, Boston, Mass.; Dr. A. Philippi, Nieheim, Germany; Dr. Herbert Judd, Galesburg, Ill.; Dr. L. A. Roller, Detroit, Mich.; Dr. X. T. Bates, New Lebanon, N. Y.; Dr. J. J. Laurence, New York; T. W. Hannaford, London, Eng.; G. W. Moody, Shelbyville, Tenn.; Louis Jarchow, London, Eng.; Dr. M. Jay, South Bend, Ind.; T. H. Woodward, Lincoln, Neb.; C. F. Boehinger & Soehne, New York; J. R. Hawley, Cincinnati; Dr. J. W. Wright, Columbus, O.; Canton Surgical Chair Co., Canton, O.; Dr. W. F. Coleman, Chicago; Wm. C. Clemison, Warrenton, Mo.; Parke, Davis & Co., Detroit, Mich.; Dr. N. S. Davis, Dr. Frank S. Billings, Chicago; Dr. W. H. Williams, Brooklyn, N. Y.; Dr. W. E. Miller, Baylis, Ill.; Dr. H. P. Allen, Columbus, O.; Dr. C. A. Harvey, Dr. Ephraim Cutter, B. Westermann & Co., New York; Geo. W. F. Price, Nashville, Tenn.; Dr. E. C. Newman, Spokane Falls, Wash.; Dr. H. R. Storer, Dr. H. G. MacKay, Newport, R. I.; Dr. A. Blitz, Dr. N. B. Carson, St. Louis, Mo.; C. F. Putnam, Boston, Mass.; Dr. W. O. Bridges, Omaha, Neb.; Dr. W. S. Watson, Matteawan, N. Y.; Dr. C. H. A. Kleinschmidt, Washington; Dr. Alfred L. Carroll, Dr. Robert Newman, Frank Kiernan & Co.; Mariani & Co., Reed & Carnrick, J. M. Ceballos & Co., Drs. E. and J. A. Cutter, New York; Louis Lloyd & Co.; Publishers Commercial Union, Drs. H. A. and F. S. Johnson, Chicago; Dr. A. M. Mason, Chatham, N. Y.; Johnson & Johnson, New Brunswick, N. J.; Dr. S. B. Craver, Bryan, O.; Dr. T. D. Crothers, Hartford, Conn.; Dr. H. R. Storer, D. M. Wick, New Hartford, Conn.; Sultan Drug Co., Peacock Chemical Co., St. Louis, Mo.; Dr. J. Williams, Dr. E. F. Newton, Boston, Mass.; Dr. J. A. Cantrell, Dr. R. J. Dunglison, Philapelphia; Dr. Max Thorner, Cincinnati; Dr. G. W. Lacea, E. Saginaw, Mich.; The Sun, Williamsport, Pa.; H. H. Howe, Weston, Vt.; Dr. J. Lowden, Carrollton, Ind.; Dr. Max E. Witte, Mt. Pleasant, Ia.; Potter & Clarke, London, Eng,; Dr. H. A. Bogie, Kansas City, Mo.; Dr. Wm. C. Woodward, Washington, D. C.; L. H. Wood, Highlands, Col.; Dr. M. Kirkpatrick, S. Omaha, Neb.; Dr. J. A. Crook, Jackson, Tenn.; Dr. Horâtio R. Bigelow, Boston, Mass.; Dr. A. J. Shockley, Ruby, Mich.; Dr. B. C. De Roo, Cincinnati; Dr. D. G. Simmons, Adairville, Ky.; Dr. Henry C. Coe, New York; Dr. S. P. Deahofe, Potsdam, O.; R. V. Woodcock, Jerome Kidder Mfg. Co., New York; A. E. Walesby, Louisville, Ky.; Dr. A. L. Hummel, Philadelphia; Dr. J. H. Carstens, Detroit, Mich.; Dr. H. C. Jones, Decatur, Ill.; Dr. J. Woitishek, Ely, Ia.; Dr. M. H. Fletcher, Cincinnati; A. Kingston, Philadelphia; Dr. C. F. Farrar, Kingston, Miss.; Dr. H. A. Lee, Liberal, Ind.; Dr. Wm. Mosby, Bardwell, Ky.; Farwell & Rhines, Watertown, N. Y.; Dr. A. P. Dudley, New York; Dr. F. P. Jenks, Brooklyn, N. Y.; Dr. J. J. Morrow, Gassville, Ark.; Dr. A. C. Haven, Lake Forest, Ill.; J. W. Farrar, Chicago; Dr. H. C. Markham, Independence, Ia.; Lea Bros & Co., Philadelphia; Horlick's Food Co., Racine, Wis.; Dr. W. W. Parker, Dibrell, Tenn.; W. D. Kline, Nashville, Tenn.; Wm. R. Warner & Co., Philadelphia; Dr. H. N. Hall, Chicago; The American News Co., New York; Doliber Goodale Co., Boston; Dr. D. C. Stillmans, Redlands, Cal.; Dr. P. M. Carrington, Savannah, Ga.; Dr. H. T. Pershing, Denver, Col.; Dr. M. T. Dodge, Troy, Me.; Dr. J. E. Hatcher, Mooreville, Tex.; Dr. O. W. McHellar, De Smet, Dak.; Dr. M. L. Pine, Fabius, N. Y.; Dr. L. F. Daggett, Sioux Falls, S. D.; Dr. J. E. MacAdams, Gardner, Ill.; Dr. W. T. Hall, Avenue, Pa.; Dr. T. H. Barton, Syracuse, N. Y.; Dr. Thos. H. Stewart, Church Hill, O.; Dr. Chas. W. Galloupe, Lynn, Mass.; Dr. E. A. Bass, Montello, Wis.; Dr. J. H. Fretz, Hagersville, Pa.; Dr. J. F. Maxwell, Resaca, N. C.; Dr. T. A. Drake, Terre Haute, Ind.; Dr. Jas. E. Pilcher, Fort Clark, Tex.; Dr. D. J. McCaffrey, Blackstone, Mass.; Dr. A. L. Carroll, E. Steiger & Co., New York; Armour & Co., Chicago; Dr. Henry Chapple, Billings, Mont.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from May 23, 1890, to May 29, 1890

Major J. B. Girard, Surgeon, is granted leave of absence for one month, to take effect as soon after June 1 prox. as a medical officer can be sent to Ft. Lowell for temporary duty. Par. 1, S. O. 48, Hdqrs. Dept. of Ariz., May 17, 1890.

By direction of the Secretary of War, a board of medical officers, to consist of Lieut.-Col. Anthony Heger, Surgeon; Major John Brooke, Surgeon; Major Robert H. White, Surgeon, will assemble at the U. S. Military Academy, West Point, N. Y., on June 7, 1890, to examine into the physical qualifications of the candidates for admission to the Academy and, in connection with the Superintendent of the Academy and Commandant of Cadets, the members of the graduating class. Reports of the proceedings of the board will be forwarded, through the Superintendent of the Academy, to the Adjutant General of the Army. Special reports will be made in the cases of any graduates deemed to be physically unfit for the military service, and also in the cases of candidates who may be admitted on probation or rejected. Par. 3, S. O. 121, A. G. O., Washington, D. C., May 23, 1890.

Major Charles L. Heizmann, Surgeon U. S. A., is granted leave of absence for one month. Par. 1, S. O. 39, Dept. of Texas, May 19, 1890.

Major John V. Lauderdale, Surgeon U. S. A. (Ft. Ontario, N.Y.), is hereby granted leave of absence for one month, to commence on or about June 1, 1890. Par. 4, S. O. 123, Hdqrs. Div. of the Atlantic, New York City, May 27, 1890.

By direction of the Secretary of War, as much of par. 2, S. O. 119, A. G. O., May 21, 1890, from this office, as relates to Capt. Robert B. Benham, Asst. Surgeon, is amended to read as follows: Capt. Robert B. Benham, Asst. Surgeon, will proceed from Madison Bks., N. Y., to Ft. Wadsworth, N. Y., and report in person to the commanding officer of that post for temporary duty.

Official List of Changes in the Medical Corps of the U. S. Navy for the Week Ending May 24, 1890.

Asst. Surgeon Rand P. Crandell, ordered to the Naval Hospital, New York.

P. A. Surgeon Thos. A. Berryhill, detached from hospital, New York, and ordered to hospital, Mare Island, Cal.

P. A. Surgeon Frank Anderson, ordered to special duty, Bureau Medicine and Surgery.

Medical Inspector W. K. Van Reypen, ordered to New York on special temporary duty.